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To

May from

Dorothy

in gratitude,

for many kindnesses given from
a warm heart

& much good advice

given from a wise brain -

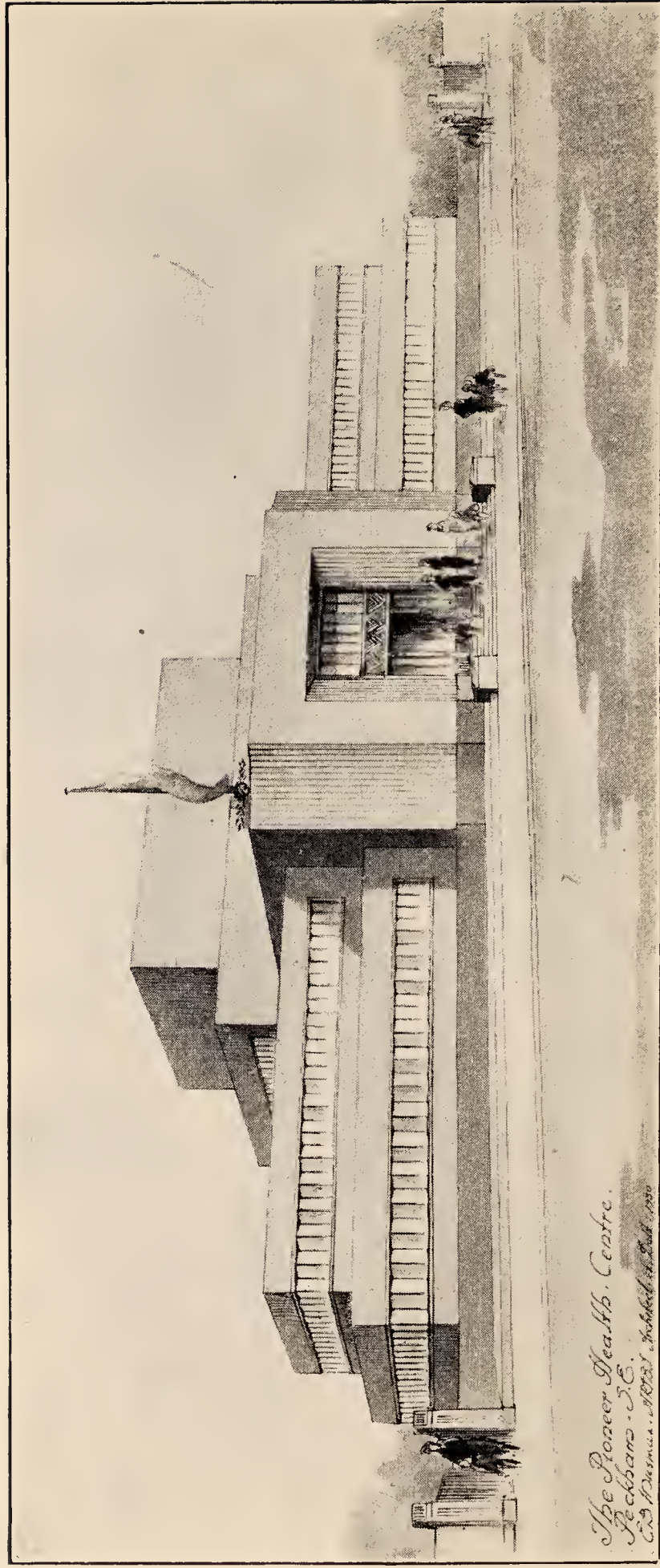
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THE CASE FOR ACTION



PROPOSED NEW BUILDING FOR THE PIONEER HEALTH CENTRE

From a drawing made by the architect, Mr. E. B. Musman, and exhibited at the
Royal Academy, 1930

THE CASE FOR ACTION

A Survey of Everyday Life under Modern
Industrial Conditions, with Special
Reference to the Question of Health

BY

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PREFACE

BY

THE RT. HON. LORD MOYNIHAN, K.C.M.G., C.B.

President of the Royal College of Surgeons

THE ULTIMATE object of all attacks upon disease is the discovery of methods not so much of curing established disorders as of checking them in earlier and still earlier stages of their career, and finally of preventing their incidence and development. The conquest of disease leads to a knowledge of methods of establishing health. Medical men, however paradoxical it may seem, design to destroy the materials of their own existence.

Our successes in the warfare against disease now allow us a breathing-space in which we may take stock of our position and plan our further assaults.

The ground over which the next fight is to take place has been mapped out in this book on plain and unmistakable lines. While holding our position on the old front we must launch an attack on the opposite front. We must approach the conquest of disease through the territory occupied by normality and health.

This is an entirely new attack. It is only now possible

PREFACE BY LORD MOYNIHAN

because time has allowed us to accumulate the necessary knowledge and equipment.

The first steps in the new attempt are here set out by workers equipped with knowledge, and ardent in pursuit of opportunity for its application. What is needed to further this well-planned campaign is money. That will be forthcoming if those earnestly concerned with the future of the human race can be persuaded to read, assimilate, and be guided by the truths so well presented in this book.

MOYNIHAN

PREFACE

BY

A. D. LINDSAY, C.B.E., LL.D.

Master of Balliol College, Oxford

BECAUSE all I have heard of the Peckham Health Centre has made me regard it as one of the most interesting of recent social experiments, I gladly accede to the request of the authors that I should write a few lines prefacing this book, though surely such good wine needs no bush.

I think most readers will feel, when they have read the account of this experiment, that the principles inspiring it are unmistakably right: that this invention in medical practice has the mark of all great discoveries—once made they are obvious.

But there are certain features of this experiment which seem to me of special interest, to which perhaps I may draw attention.

The late Dr. Bosanquet had a phrase for what he thought to be the principle which should inspire all sound social reform—‘the principle of social self-maintenance’. We are to help people to maintain themselves in their social environment. An attractive principle if only one knew how to put it into practice!

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The authors of this experiment have shown an almost uncanny power of getting hold of all the positive fruitful elements in family and social life and making them work together, and have shown how creative such a synthesis can be. This is an abstract way of saying how much can be done with human beings when scientific knowledge is inspired by the quick human sympathy, shrewd common sense, and never-failing faith in human nature of which this book gives abundant witness.

Secondly, this work at Peckham has the great interest of having developed into what we call a 'settlement', but one founded on medicine. I think that has meant that more than other settlements it affects the average family. It triumphantly surmounts a difficulty which is often a puzzle in adult education, in that it gets hold equally of the whole family—husband, wife and children. It is pleasant to think that a social experiment which re-integrates the family should be based on science. My old teacher Dr. Edward Caird used to be fond of quoting the saying of Hegel—'The wounds of reason can only be healed by deeper reason'. This book, which has so much to tell of the disintegrating effects of applied science in our social life, shows how the wounds of science can be healed by better science.

Lastly, in this experiment we have another and a very notable instance of the fruitfulness of the co-operation between the State and voluntary effort. If we suppose that what the State does is to be regarded as entirely sufficing and adequate, what it does will very likely be bad: it will certainly have great limitations. If we use

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the uniform and standardized work the State can get done as the basis for voluntary effort, the voluntary effort may supply the one thing needful. Something comes of the co-operation which could never come from either working alone. That has been proved true in adult education; it is being discovered to be true in some recent experiments dealing with the human side of unemployment. This book brings home the fruitfulness of voluntary effort co-operating with the great machinery of health insurance.

Truths the most universally applicable are sometimes those we most easily forget to use. Each new lively reminder of their potency is I think a cause for gratitude, and I am grateful in this sense also to the writers of this book.

A. D. LINDSAY

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CHAPTER I

THE CASE FOR ACTION

HEALTH or Sickness? There was no alternative. In this belief the Victorians were bred; in this belief they grew up. A child who was not sick was able to eat its dinner; a man who was not incapacitated was able to work; and no nonsense about it.

Since those days medicine has made advances and understanding of disease has become more discriminate. Moreover, there has been a war with its bitter experience and its vivid enlightenment. It was the experience of the War that first led us to see that the 'nonsense' lightly attributed to the child by the Victorian parent was perhaps more justly attributable to the parent himself. Health or sickness were no longer the only two alternative states. There was a third condition—'C-ness'. During the War the number of youths entering the army who had to be classed in the C category of physical and mental fitness gravely disturbed the nation. They were not sick, nor were they healthy. They were 'invalid' for work or fighting—devitalized.

Thus we now know that there are two menaces to health—disease and devitalization.

Have conditions not improved since the War? No.

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The last returns from the navy, the army and police force show that 90 per cent of recruits offering themselves for service were refused at the first medical examination as not having obtained the necessary standard of fitness. There is no apparent improvement shown since the War in the health of the youth of this country.

Let us turn to education and the schools. There the evidence is identical. Official reports state that over 1,000,000 children in this country are too unfit to take advantage of the education offered to them by the State and paid for by the taxpayer. Disease and devitalization are making ravages even among the very young ; that is to say, at the heart of the nation.

These facts are frankly admitted by responsible authorities. The reason for them is not apparent. Never has infant mortality been lower than at present. Never has the country been so free from infectious disease. Never has the country been so fully provided with hospitals, charitable endowments, special clinics, sanatoria, convalescent homes, country holiday homes, provision of free food, drugs, lectures, health propaganda, etc., all directed to the cure or to the prevention of the effects of disease. We must conclude that these measures apparently are inefficient to remove disease and devitalization from the youth of the country.

What, then, are these agencies effecting in the adult population? Disease is being treated with the result that the expectation of life is being lengthened. More people live longer than formerly. On the face of it this seems satisfactory. It is unfortunate, however, that advances in medicine often make it possible to prevent death

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without being able to give health. Mutilation may be the result of an operation without which the patient must surely have died. Insulin may prevent death from diabetes, but it cannot remove the disease; still less can it give the sufferer health. Thus, in lengthening life, it is possible that we are merely adding years of ill-health to the expectation of life. The relative percentage of unfit must surely rise from such a procedure.

Running parallel with this tendency for the percentage of the unfit to rise, there is a concurrent movement to make the circumstances of existence for the unfit easier and easier. This were well enough did it not inevitably entail the shifting of the burden from the unfit to the shoulders of the already over-burdened fit.

The statesman noting this trend of circumstances is appalled at the further weighing down of the responsible section of the community. It would seem that in compassion for the diseased and devitalized we have lost a sense of proportion as well as common sense. While concentrating upon disease in the unfit, we have been ignoring the development of health in the fit. We have been blindly and diligently working to reverse the law of Nature by procuring the survival of the unfit. We are running the danger of being led into the impious position of loving disease above health.

That the individual should be stirred by compassion for the sick and suffering is fitting. That he should respond to distress in the persons he is in contact with is of itself a sign of his own health and vitality. Such personal transactions weld life into one rich and homogeneous whole. But when compassion for the sick and

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distressed is relegated to the mere disbursal of moneys through a vast and therefore mechanized organization or, still worse, through the State, the aspect changes. With the loss of the personal relationship between donor and recipient, virtue evaporates. The donor by the gift may unwittingly be reducing the recipient to dependence and ultimate spiritual destitution. The rift between the classes is sprung deeper into the national life.

Taxation and the disbursements of charity are not the only burden carried by the fit section of the community. The toll that sickness levies on the responsible individual through industry is considerable. One large firm calculated its loss due to sickness, in one year alone, as £119,000. This does not include the incalculable loss due to the devitalization of many of the employed operatives not actually sick, who crowd the ranks of labour, as every other walk of life. Devitalization diminishes the speed, the efficiency and the quality of work done.

But the cost of sickness, the burden of a devitalized people, is not the worst aspect of the situation. An increasing sick-roll and devitalization of the people mean a relatively increasing number of devitalized and unhealthy parents. The youth of the nation is being threatened *before* it is born. The eugenicist is in despair.

By each section of the public a means to stem the tide of unfitness is being sought. To ensure fit recruits the State offers to the Services infant welfare and school inspections. To Education it offers free meals and free milk; and now contemplates free education in secondary schools and the dole! Charity increases all its efforts

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only unwittingly to swell the ranks of the dependent population. Industry turns inward and seeks 'rationalization' as a means of compensation for the inevitable. The medical profession, still content with palliation as its highest goal, cries for the earlier treatment of disease. The eugenicist, boldest of all in his despair, demands birth control or even sterilization of the unfit.

The biologist alone still holds out hope. The power of environment may yet be potent to save the individual. If environment can be changed *early enough*, the child at least may be saved from the twin shackles of disease and devitalization.

'Change the environment!' 'More hopeless and more expensive than ever' is the inevitable remark of the reader already suspicious that herein lies some argument still more specious than the last for a vast national and charitable enterprise. The research work set out in this book will show that this is not the case. It will show that the environment must and can be changed. But it will also show that if it is to be changed to produce health it must be changed by the individual himself, for the essential of health is that it should be self-acquired and self-supported.

A small company of private individuals took up the challenge implied in the foregoing pages. They determined upon a preliminary inquiry. To this end the first Pioneer Health Centre was opened in April 1926.

The first step was to review the situation as it existed at the moment. There were certain questions to be asked at the outset.

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- 1 Is it true that the working adult population is suffering from disease?
- 2 Is it true that the youth of the nation is largely of a C standard of fitness?
- 3 If it is true, how is it that disease and devitalization have occurred?
- 4 Can disease and devitalization be cured?
- 5 Can disease and devitalization be prevented?
- 6 At what point in the life of the individual can they be prevented?
- 7 What should be the nature of the preventive measures?
- 8 Could the individual be induced to take his part in prevention if the opportunity were available?
- 9 Is there any source of power in man still untapped which could be utilized in the cause of health?

These questions have been set out categorically to indicate the scope of the inquiry that was made. The answers to them will be found in the body of the text, for any categorical answer would only be possible for each individual case considered on its merits.

The following report deals with the nature of the first tentative organization, the findings culled from it, and the conclusions derived from it as to the need for developing the service already inaugurated on a small scale.

CHAPTER 2

THE ADULT AND DISEASE

IN a small house in Peckham known as the Pioneer Health Centre, situated in the middle of a densely populated artisan district, we installed a resident medical officer, a social secretary and a housekeeper, and proceeded to invite families living in the neighbourhood to join a Family Club for a small weekly sum per family.¹ In return for this we offered a periodic medical and dental overhaul for each individual of the family, a parents' clinic served by both man and woman doctors, ante-natal, post-natal, and infant welfare clinics. To these we added an orthopædic clinic and a children's afternoon nursery.

The service offered to each family attending the centre was an *advisory* one. Its objects were to evoke a desire for health and to detect and call attention to the beginnings of disease, while at the same time giving advice as to how to procure any necessary treatment. No disease received treatment at the centre. This was carefully explained to each member-family before joining, and they understood that the Pioneer Health Centre was concerned with health rather than with disease.

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THE PERIODIC MEDICAL OVERHAUL

The periodic medical overhaul was obligatory for every member of a family joining the Pioneer Health Centre.

It afforded a means of extending to the whole adult population the practice of preventive medicine at present in operation only in infant welfare work and to some smaller degree in inspection of school children.

For every adult member of a family the periodic medical overhaul implied a regular yearly review of his condition, and the opportunity of skilled advice as to the adjustments necessary for the maintenance of his well-being. This gave the doctors an opportunity, rarely obtainable, of coming to know something of the circumstances in which each individual in the family was living, and the relationships of one individual to another. In fact, the periodic medical overhaul was a means of bringing us into contact with the whole family at the outset.

The procedure was as follows. After the family joined, an appointment was made by the social secretary for the medical overhaul of each parent. Usually it was made for some evening in the following week. If, however, the individual happened to be a night-worker, his appointment was arranged for his night off duty, or so that it would not clash with his work. This met the convenience of the members, who arranged to attend in their leisure hours and on a day sufficiently far ahead for the wife to be able to make plans for the preparation of a bath and a clean change of clothes,

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without which no member ever liked to attend the consulting-room.² It must be remembered that these things are not available at a moment's notice in a home that consists of one and a half rooms in somebody else's house.

The organization of the Pioneer Health Centre, instead of being built around the convenience of the medical staff, as is usual in medical institutions, was specifically designed to meet the convenience of the people we desired to attract. We had to arrange that responsible attention to their own health should not involve them in loss of time which also means loss of wages. Perhaps this calls for further explanation. If a man is ill and incapacitated, whether he is rich or poor, he is in the hands of the doctor. He is too ill to work, and he therefore rests content that the doctor will see him rapidly according to the urgency of his case. This is a correct procedure where incapacitating sickness is in question. But many a man has the wisdom to consult a doctor before he is utterly incapacitated. Indeed, commonsense as well as personal responsibility demands that he should do so. No busy city man would be required to attend a consultant for this purpose at a time which would involve him in financial loss. He is able to make an appointment to suit his convenience. Yet this is not the position of the working-man. If he wants a special opinion or treatment he must attend the out-patient department at a hospital. This implies absence from work and loss of wages, for out-patients are seen in the morning or afternoon according to the convenience of the consultant who offers his voluntary services to the

THE CASE FOR ACTION

hospital. In existing circumstances the working-man must make the choice between his health on the one hand, and his work and wages on the other.

We had to overcome this difficulty. It was arranged that the main bulk of the medical work, with the exception of the infant welfare section, should be carried out after 4 p.m. daily, and that nearly all the work on adults should be done at evening sessions from 8 to 10 p.m. This naturally put a strain on the staff, but the very ready appreciation with which it was received by the members left no question as to the necessity for its continuance. Indeed, the fact that we laid ourselves out to meet the convenience of the members rather than the convenience of the staff proved to be one of the abiding attractions of the Centre.

MEDICAL EXAMINATION

The appointed time arrived, the medical overhaul began in the consulting-room with a history of the individual from his birth, his place in the family, education, illnesses, work from time of leaving school, marriage, etc. Then followed his family history, place of origin, trade and health of his parents, etc. In brief, some attempt was made at elucidation of his parents' circumstances and tradition. Never before had any one taken serious interest in these personal matters, for in the welter of city life there are few who know and fewer who care about the antecedents of the working-man. Even the doctor, once the friend of the family, knowing three generations, is no longer the 'family doctor'. He is now

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the 'panel' doctor, dealing with the insured members of the family only.

While the personal history was being recorded for future reference, the member was shown into a cubicle. He was required to strip completely and to put on a clean white cotton gown, presented to him in a sealed envelope. Over this he put a dressing-gown for warmth.

Then followed the medical overhaul. His vital capacities were tested, heart, lungs, kidneys, muscle, etc. Every detail of his anatomy was reviewed: eyes, ears, nose, throat, hands and feet, and so on. After this the accessories to medical examination, such as the stethoscope, blood-pressure apparatus, ophthalmoscope, etc., were used for arriving at some knowledge of the state of his organs. At the time of (or in suitable circumstances after) the overhaul, specimens of blood, urine, etc., were collected for laboratory examination. Nothing that we know how to investigate clinically was omitted, for neither the individual nor the doctor was working under pressure of the emergency of acute illness. While the examination was in progress any detail of the family history that had been forgotten or not disclosed was revealed, for by this time the member had become entirely at his ease. While he was dressing, notes of his condition were recorded in detail for future reference as well as for statistical and research purposes.

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FINDINGS AT THE MEDICAL OVERHAUL

Of all the parents over 25 years of age examined by us, we were greatly astonished to find that for all without exception there was something to be done and that in many there was frank disease. The sort of conditions we discovered may be set out under the following headings:

- 1 Manifest Disease
- 2 Cryptic Disease
- 3 Precursors of Disease.

MANIFEST DISEASE

Under this heading is included all disease recognizable by the individual who is suffering therefrom. In quite a number of parents we were surprised to find the presence of major disease by which the individual was periodically incapacitated for brief periods, and for which immediate treatment was necessary.³

In a still greater number of the adults we found minor maladies, all causing the individual considerable inconvenience.

Why, we had to ask, in the face of the very full provision of therapeutic agencies, did these conditions remain untreated?

The reason is twofold.

Firstly, the disease was just bearable and the individuals just able to carry on their work. Secondly, they had adjusted their lives to the disorders and become content to live at a lower level of existence than was necessary. What had brought about this attitude towards disease in the people?

THE ADULT AND DISEASE

The difficulties under which the working-man labours, where the treatment of disease is concerned, are not fully appreciated. It is true that the level of his existence may be such that he can barely provide for the present, in which case any looking ahead is out of the question; but there are many men and women, having a more or less steady wage, who are in a position to attend to their personal health and who would like to do so.

The loss of time consequent upon attendance at any of the established therapeutic agencies is such that on the part of the man fear of loss of work, and on the part of the woman the difficulty of finding any one to look after the children and the home, prevent action being taken. Circumstances are such that they feel that they must go on till they drop. This idea is in some way bound up with a vague and misplaced sense of duty. The importance of keeping fit is dimly visualized by all, but the significance of the insidious onset of incapacity due to disease is nowhere understood. Yet the working-man, perhaps more than any other member of the community, is alive to the menace of disease. His well-being is intimately linked with his wages. He is not the apathetic individual we are generally led to believe, careless and lazy. He understands the necessity of keeping his working tools in order, and he is prepared to give equal attention to his person if only he knew how. He would readily have something done for his varicose veins, for his flat feet that are causing him fatigue, or try to get rid of his indigestion which makes him so irritable at home, if there were some means of ensuring that in so doing he would not be involved in a disastrous loss

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of time and in a fruitless enterprise. Although agencies exist which should make treatment possible, these people have great difficulty in approaching them without material loss.

The foremost among the therapeutic agencies for the working-man are of course the great hospitals. Surely in their extensive out-patient departments served by every sort of specialist he could find the help he seeks? ⁴ Let us consider for a moment the history of the great hospitals. For the most part they were founded as charities for the relief of the poor, the sick and the dying. They have grown up where they stood, overburdened with the heavy responsibility of tending acute illness and established disease, and perhaps for this very reason, they are overshadowed for the working-man by a vague but ominous portent. Many a man suspecting serious illness will not go of his own accord to the hospital until he drops and is carried there. At such a moment there is urgency, and the best that can be done for him is done in the emergency. By this time the man is suffering from several secondary conditions, the inevitable retribution following upon his first trouble. Even though his primary lesion be removed, these secondary conditions, consequent upon his first long untreated malady, may render him a chronic invalid. Delay has cost him dearly.

Perhaps another man is younger and wiser. He decides to go to the hospital for advice *before his illness becomes chronic and established*, or before he is driven there by an acute emergency. He pays perhaps three visits to the hospital out-patient department, losing three

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half-day's work, before he succeeds in seeing the right specialist. There are so many patients so very much more seriously ill than he, that he gets but a perfunctory examination. He is dispatched with a bottle of medicine and is told to come again *if he is worse*. He comes away with the idea that the doctor and his attendant retinue of students somewhat resent having their time taken up with what appears to them to be a trivial case of illness. This experience does not encourage him to go again. He tries the busy panel doctor with similar results, for with the panel doctor also, serious illness must take conspicuous precedence of early and non-incapacitating disease. Finally the young man gives up the attempt, and lapses into the habits of his elders, and does not bother any more until he is actually incapacitated by his trouble.

In the Pioneer Health Centre cases of manifest disease disclosed by the periodic medical overhaul were referred to a suitable source for treatment directly they were found by the doctor conducting the overhaul. Owing to the provision of a periodic medical overhaul disease was discovered and brought to treatment perhaps, on an average, six to ten years before in the ordinary course of events it would have reached a doctor's consulting-room.

There is another source of manifest disease prevalent among the working-class population. It is that due to lack of after-care of acute incapacitating illness.

If a man is ill enough to be taken into hospital he is kept there or sent to a convalescent home till his condition has cleared up and he is fit for work. Thereupon he

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is discharged from hospital and escapes henceforth from medical aegis till the next breakdown occurs, which it is bound to do, as the physician or surgeon under whose care he came well knows. Who is to look after him? The hospital is too occupied with the next urgent case. His panel doctor, whom he has never visited, knows nothing about him or his illness. The panel doctor is fully occupied treating the sick, and has no time to give to those who appear well. Yet this man who seems well has need of medical attention. He requires skilled advice as to how to adjust his life and work to his diminished capacities. Only by these means can a relapse be prevented. What can be done? The man has been out of work some weeks owing to illness. He cannot now afford to throw up the work that has been kept open for him, no matter how unsuited it may be to his diminished capacity. He must return to it or add unemployment to his previous troubles. The hospital almoner, auxiliary to the consultant, does her best in the emergency, but to find him the right work in a hurry is frankly impossible.

This is well illustrated by the case of a railway ganger of 39, who had an acute perforated gastric ulcer of which he nearly died. During his convalescence he fell ill with an attack of acute double pneumonia. This prolonged his illness over a period of months, during which time the family resources were sorely reduced. On his return, the railway company sought to give him lighter work for a time. All that could be offered him was a post of 'flagging'. This entailed standing idle with a flag

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all day, wet or fine, and during fog duty. Pneumonia is prone to recur. Damp clothes coupled with idle limbs and idle lungs are predisposing factors to relapse. To this, fog was added. Any occupation more unsuitable for that particular case could not have been conceived. Yet even that was a concession. The man could not but accept it gratefully, for his gastric condition rendered him unfit for lifting weights and swinging heavy hammers.

The hospital almoner had done her best in approaching the railway company. For the moment she can do nothing further, and the next case, probably one of even greater distress, is immediately upon her. She must inevitably lose sight of the man; even the distance of his home from her office makes this inevitable. From that time onwards, till he is carried into the hospital the next time, the man is lost to medical care.

For this deplorable yet inevitable state of affairs there is no possible remedy other than the provision of some organization like the Pioneer Health Centre. The circumstances demand an organization centred in the district in which the people live and provided with means such as a periodic medical overhaul and a family club equipped for preventing the onset and stemming the progress of disease and its attendant ills. Not only must there be a means of bringing an individual to treatment earlier, but also provision must be made for his after-care. Had the man in question become a member of the Pioneer Health Centre earlier, his ulcer would have received treatment *before* perforation. It is possible that pneumonia would not have followed, had his

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resistance not been previously lowered. In addition to this, the situation which had arisen was dealt with. On his return home the social secretary of the Pioneer Health Centre immediately helped this man to find the means of acquiring water-tight boots and a mackintosh, a great difficulty owing to the reduced finances of the family at the time. Ultimately new and satisfactory work was also procured for him *without preliminary loss of work and wages*.

It will be clear that after an incapacitating illness, consideration must be given to the degree of working efficiency left to an individual. For example, no one would send a printer who had suffered severely with his eyes, back to the work of composing. The need of providing him with other suitable occupation would be obvious. This has been recognized with almost miraculous results in the Papworth colony for tuberculous patients. On a lesser scale it is an urgent necessity for the proper after-care of all illness.

The organization of the Pioneer Health Centre was such that the medical staff was provided with the services of a social secretary who, knowing each family personally, was in an admirable position to deal with the urgent problem of social adjustment.

Not only, therefore, was the working-man provided with the means of warding off disease directly he became conscious of its presence, he was also afforded suitable after-care when his capacity had been reduced by illness.

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CRYPTIC DISEASE

We have had to point out that the voluntary hospital service and the agencies for dealing with disease in the working-man, fail lamentably to deal with it till the individual is incapacitated. We have had to point out, moreover, that the hospitals themselves are actually defeating the working-man in any effort he may make to ward off incapacity the approach of which he can foresee.

There is another category of disease upon which we have not yet touched, namely cryptic disease, disease hidden from the sufferer himself. All disease goes through the stage of being hidden in this way. The hidden stage may be rapid or it may be long drawn out. As we shall see it would be useless merely to afford the individual better means of earlier treatment, for, being unaware of cryptic disorder, it would not occur to him to avail himself of them.

The layman may ask how it can happen that a man may be ill and not know of his illness. The explanation of this is to be found in principles of physiology. The body works on the basis of very large reserves held in store to cope with the demands made upon it by action and in emergency. If for any reason one organ begins to fail, other organs of the body, calling upon their several reserves, do 'overtime' as it were, to maintain an efficiency in the body as a whole. Technically they are said to 'compensate' for the initial deficiency. Indeed, so efficiently is this done, more particularly in cases of insidious disease where slow transference of the

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load from one organ to the other is possible, that for long periods the presence of the disease may remain entirely masked. All the patient can ever be aware of is a general inability to exert the same effort in emergency as formerly.

This was well illustrated in the case of a man of 39 who all his working life had been employed by the tramways. His work was that of a paviour. Laying stone sets between the tramlines on crowded thoroughfares for seventeen years or more, he had worked care-free and fearless of the traffic. Just about the time he and his wife joined the Pioneer Health Centre he had become nervous of the traffic, and his wife it was who asked anxiously if the doctor thought anything could be done for her husband as she understood that if a man became nervous he was very prone to accident. At the medical overhaul the husband himself complained of nothing except a slight morning cough; he considered 'nervousness' too trivial to speak to the doctor about. It was found that he had advanced emphysema (a condition of inelasticity of the lungs which diminishes their capacity for filling with air). Examination disclosed that this had overstrained his heart, although the breakdown point of neither lungs, heart nor the man's constitution generally had yet been reached. He was unaware of his physical disability; he only knew that he had lost the confidence he once had in himself. His former confidence was born of intuitive knowledge of reserves formerly entirely at his disposal in emergency. Disease had stealthily robbed him of these reserves. He was not aware of the disease, but, purely intuitively, felt he

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could no longer cope with situations that might occur. Knowing of no reason for this state, he was 'nervous' without reason, and therefore ashamed of being nervous. Only a trained observer could detect the disease and link the lack of confidence with the slow encroachment upon the man's functional reserves. The man himself could not diagnose that he was ill, but his very intuition, in this instance destructive to himself, because issuing in unreasoning fear, became for the doctor a valuable measure of the extent of his disease.

As in the above case, a man often has no means whatever of detecting disease that is robbing him of his reserves even if he does notice that he has less power than formerly. Further he may quite well be unaware of loss of his reserves, for capacity for action seems frequently to determine the extent of the desire to act. This is well seen in advancing old age where the reserves are diminished and the desire to exert effort tends to wane simultaneously. The desire for action having gone, there is no means of discovering that the capacity to respond is likewise gone. In such circumstances, how can a man know that he is ill, still less know the nature of his illness? Yet the treatment of all illness is at present made to depend upon the patient diagnosing that he is ill.

From the above considerations it follows that the burden of the detection of disease should rest upon the medical man. Has he not been trained to shoulder that particular responsibility? No one would deny this assertion. Nevertheless, no method to permit of its

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accomplishment had been found until the Pioneer Health Centre was established.

A great deal is heard to-day of the necessity of bringing the doctor into touch with disease in its earliest stages. Indeed, every medical man interested in his profession has one grouse in common with all his fellows. Whether he be president in the chair of one of our august medical foundations, or whether he be a humble practitioner in the chair of his own surgery, the cry is the same: 'If only the patient would come to us earlier!' Yet, whatever the doctor's eminence or accessibility, his position is unchanged; he must sit and wait; wait, not only till the patient is aware of the illness, but generally till the man, inconvenienced by sickness, gathers courage to hear his fate.

The medical profession, though asking to be given disease at the earliest moment it is detectable, has remained content hitherto to leave the detection of disease to the patient himself. It is astonishing that this should be the case. As a student the doctor spent much time learning, not only to detect disease, but to detect also the play of those very compensatory functions which may mask disease, and in his practice he is highly skilled in the employment of compensatory action in therapeutics. The doctor of the future must ask for disease at the *earliest moment he himself can detect it*, for only in this event can he do full justice to the patient and to his own skill.

Doubtless much of the concern of the medical profession for the earlier treatment of disease has been derived from specific advances which have been made in recent

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years in the treatment of cancer by surgery, and still more with radium. It would appear that where the cancer is discovered early, before secondary invasion of distant organs has occurred, a very satisfactory prognosis can now be made. The same is equally true of diabetes. We suspect this concern on the part of the doctor arises from a desire to be able to cure more satisfactorily rather than from a desire to prevent disease. But, no matter from what source the growing realization of the necessity comes, earlier approximation of patient to doctor is still impossible to effect.

An attempt has been made to overcome this difficulty by educational propaganda directed towards bringing the patient to the doctor earlier. In order to sift out disease, the propaganda must be strewn indiscriminately throughout the population. In many ways this is undesirable, for it is apt to stress the fear of disease in the minds of the people. Instead of the emphasis falling upon health, as it should, it inevitably falls upon disease. Preoccupation of the minds of the general public with disease and morbid symptoms is not desirable.

This, however, is not the only, nor even the principal, objection to the campaign of propaganda. Propaganda cannot touch the central problem for, however efficiently it were to operate, *the diagnosis of ill-health is still left to the patient*. The doctor still has to wait till the patient has discovered his illness. Propaganda alone can never shift the burden from the patient to the doctor, who alone can carry it.

In the history of medicine, until recently, health has been taken for granted. It has passed unnoticed while

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disease has asserted itself and called for attention. Perhaps it is for this reason that for many centuries knowledge of disease has been sought in the study of its florid and fully expressed forms. Minute inspection of post-mortem findings and careful and detailed description of each disease complete with all complications and *sequelae* filled, and indeed still fill, the medical textbooks. This fact bears testimony to those aspects of medicine till but recently occupying the attention of teachers and research workers alike. Sir James Mackenzie was the first to approach the problem from a different standpoint. His work stands out prominently, marking the turn of the tide of interest and research in medicine. Mackenzie first pointed out the need of studying not the end but the beginning of disease, and of seeking for its earliest manifestations. For this purpose he founded his Institute at St. Andrews. Once a patient of the Institute, an individual is never lost sight of, but kept constantly under observation. The object of this is that new symptoms may be detected as soon as they arise. We have far to go to attain Mackenzie's standard of professional endeavour, but even were it possible to do so, there would yet remain to be found a means of coming into contact with the individual not yet incapacitated. Still more important is this in the case of the individual suffering from cryptic disease.

The doctor of the future must not only diagnose the nature of an individual's illness, but must diagnose also the fact that the patient is ill.

At the Pioneer Health Centre we had under continual

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medical observation average people unaware of any illness. Thus we had successfully devised an organization which brought individuals into easy contact with the doctor at regularly recurring intervals. This made for the first time, not only treatment, but also research into the early stages of disease, a possibility. Had our experiment reached no further, this fact alone would afford ample justification for continuance of such an organization. We had touched one of the central problems of medicine at this moment. In meeting the clinical need, simultaneously the organization also met the need of research into incipient disease, as we shall see later.

In the Pioneer Health Centre we did not ourselves undertake to give any treatment. When established disease was present the member was referred, according to his choice or expediency, either to his own doctor or to the hospital. Thus, the new organization we had created did not overlap existing agencies. We were examining individuals who would not otherwise have been examined. We were referring these individuals to an appropriate source for treatment much earlier than otherwise would have been the case. Often, indeed, we were able to refer them at a time sufficiently early for cure to be effected, whereas if the condition had been allowed to continue over a period of years, all that therapeutic skill could then have achieved would have been mere palliation.⁵ Far, therefore, from being in competition with the existing therapeutic agencies, we were auxiliary both to the private doctor and to the hospitals.

Many were the beginnings of disease which we were

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able to frustrate by the simple measure of sending an individual for timely treatment to a suitable physician or surgeon. This was always done by appointment with a letter of introduction, just as if he had been a private patient. When, for any cause other than an acute condition, a man was to go to hospital for a period of daily treatment or observation, this was arranged for a convenient time, such as his one month on night duty out of three months' work. If he had to go into hospital, then it was arranged for the fortnight before his holidays, so that he might have the maximum of convalescence with the minimum loss of time. By careful arrangements of this order, where treatment of any but acute conditions was in question, we were able to avoid loss of work disastrous to the man and his family and wasteful and costly to his employer.

It was this fact perhaps more than any other that made our people willing to seek treatment when they were advised to do so.

Thus every condition demanded by the newer needs of medical practice was fulfilled by the organization of the Pioneer Health Centre. The patient presented himself voluntarily for periodic overhauls. The disease was referred to a therapist at the first minute it was discoverable *by the doctor*. The patient was disposed to accept treatment for the disease before secondary injury had ensued from its continuance.

THE PRECURSORS OF DISEASE

Up to this point we have been dealing with established disease, both disease manifest to the patient and

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disease recognizable only by the doctor. In considering the precursors of disease we enter the domain of Preventive Medicine. Originally preventive medicine implied the branch of medicine which dealt in the main with the elimination of epidemic and parasitic diseases in the population as a whole. It concerned the mass rather than the individual. With the introduction of Infant Welfare Work the principle of prevention in medicine was extended to the individual, and since that time there has been developing a practice of Preventive Medicine running parallel with the old established practice of therapeutic medicine.

Its aim, unlike that of the older-established practice of medicine, was not directed to the cure of disease but rather to prevent disease occurring in the baby. Gradually this form of medical practice has extended, first in an abridged form to the school-children, and latterly at the infant welfare centre to include the young child up to school age.

Since the War the scope of industrial medicine has widened and the practice of preventive medicine has in some cases extended to the adult in industry. Medical examination of employees is made use of for the purpose of eliminating undue risk in personnel and to remedy effects in the employee likely to be detrimental to the output of the individual or to the morale of the works.

Latterly an abridged form of the practice of preventive medicine has appeared in an unexpected quarter. In America the Metropolitan Life Insurance Co., finding the periodic overhaul of its clients profitable to

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itself and its clients, has offered the periodic medical overhaul free to those who care to avail themselves of it. The beneficial results of this procedure alone have apparently been remarkable.

Nowhere, to our knowledge, has any attempt been made to offer a periodic medical overhaul to any section of the adult population in the British Isles. Certainly until the Pioneer Health Centre was established the full practice of preventive medicine had nowhere been extended to the family as a whole.

As we have seen in the foregoing section, the periodic medical overhaul is a net into which all disease can be gathered at the earliest moment it is recognizable by the doctor. Nevertheless, this formal overhaul is insufficient as a means of observation where the prevention of disease, and still more where health, is the goal. To prevent disease in an individual it is essential for the doctor to have an opportunity of observing his habits and reactions when operating unrestrained within his environment. How does he behave in his family circle, to his wife, to his children? What is his attitude to his work? What his reaction to other individuals within his immediate social circle?

It is impossible, by direct question at a consultation, to elicit from the man in the street information concerning his conduct and behaviour. Even the trained psychologist, who is supposed to be able to detach himself sufficiently to give a description of his own temperament and habits, signally fails to do so. The doctor must have the opportunity himself of observing the individual in the course of his ordinary life.

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This was once possible in medical practice in England. Up till about forty years ago the private practitioner lived among his people and shared in their common social life. Town life, and the segregation of the people into more or less distinct social grades, each living within the confines of its own district, has changed medical practice. The practitioner in an artisan district complains quite naturally that he is isolated: that there is no school for his children, no possibility of social life for himself. This explains the growing number of 'lock up' surgeries in working class districts. He and his family as individuals are not the only losers in this change. As a doctor he is the loser, and the families he serves lose also from his lack of intimate knowledge of their lives.

A means had to be found to regain this lost opportunity. The medical staff of the Pioneer Health Centre had to be brought once more into some more or less close and leisurely contact with the families the Centre served. The relationship that existed between the old-fashioned family practitioner and his patient had somehow to be re-established if we were to attempt a fuller medical practice than therapeutics alone demands.

To meet this need, we threw open the accommodation available in the small house in Peckham as a club and cafeteria for the daily use of member-families from 2 till 10 p.m. Here, perhaps twice or three times a week, the mother with the young children would come in the afternoon. The children went to the nursery under a Sister's care, while the mother had tea in the club-room with the other members. The school-children joined her at 4 p.m., and all stayed till 6 p.m., when the mother

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returned home in time to put the small children to bed and to prepare supper. On other evenings, after the father had had his tea and a wash he and his wife would come and spend the evening with the other parents at the Centre.

Out of this association of the members all sorts of social activities gradually became established in the club. People began to make friends in a way that we afterwards discovered to have been quite impossible in their homes, where overcrowding is such that any social life whatever is liable to become an invasion.⁶

The 'Centre', as the people came to call it, became in a very real sense a centre of their social life. In this field the doctors moved freely among the people. Here ample opportunity occurred of making observations to supplement those gathered in the consulting-room. Here it was that we were able to detect a number of ill-defined conditions, physical and mental alike, all of which might be called precursors of disease.

For convenience of description these may be divided roughly into two categories:

- (1) Bad habits
- (2) Maladjustments.

Bad Habits.—The formation of bad habits is likely to induce disease if long persisted in. Particularly is this the case with such things as over-indulgence in smoking, alcohol, excessive exercise when already fatigued, etc. In dealing with these conditions there was no necessity to refer the individual to any therapeutic agency at all. Advice and such other means as we had at our disposal usually sufficed to remedy the condition.

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The following case affords a good example of this order. A man at his periodic medical overhaul complained of indigestion and nausea. His wife was a good wife who saw to it that when he was at home he was well fed. But many of his meals were taken at his work. It turned out from careful inquiry and observation that he had fallen into the habit of eating when and what his fellow-workers ate, and that quite inadvertently he was having no less than six meat meals a day! That cause of indigestion and nausea was easily remedied. Had it been allowed to go on, it might well have led in the future to a rich crop of disease. In this case the advisory service sufficed to prevent further illness. No treatment of any sort was necessary.

A somewhat similar example is afforded by the woman in whom recent colds in the head had time after time been followed by a severe laryngitis. The diagnosis, smoker's laryngitis, was easy, for she was known from observation in the Club to have become latterly a heavy smoker. Had this woman been interrogated in the consulting-room about smoking, she would have admitted to the habit, but would have been genuinely unaware that her smoking was excessive. The surprise with which the smoker finds his packet of cigarettes empty is proverbial: but over and above this, where retribution does not follow quickly upon over-indulgence, the habit is not linked in the mind of the individual with the result. Thus the fact of over-indulgence does not rise into the consciousness of the individual. The doctor, by lifting this fact into consciousness early, before the habit has become an established one, renders

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its disruption comparatively easy. This form of laryngitis called for no drugs, yet the woman would not have been content with mere advice from any doctor she had called in to treat her.

By the timely correction of habits calculated by their cumulative action to induce illness, we were able, through the organization of the Pioneer Health Centre, to *prevent the onset of disease*. This is of greater value than the cure of disease, even in its earliest stages. The value of prevention is difficult to assess practically. Where disease has been prevented, who can say that it would surely have ensued in the absence of any interference? The more satisfactorily disease is prevented, the less there is to show for it in immediate results. The spectacular case is the exception, not the rule. Indeed this applies to the practice of preventive medicine in not only personal health, but public health also. It is almost as rare for an individual to say 'How lucky I am I have not typhoid' as it is for a young girl to say 'How lucky I am I have not bow-legs'. Yet the freedom from the first may well be due to the vigilance of the public health authorities, and the beauty of limb of the second to the vigilance of the welfare doctor in administering proper diet in infancy.

Maladjustments.—These may best be described under the headings:

(1) Physical

(2) Psychological.

Physical Maladjustments. Of these we find many. There was the man who was habitually overclothed because his wife was afraid he would catch cold. There

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was this woman with flat feet because her shoes were too tight: the man with lumbago who was found by the orthopædic surgeon to be pushing his barrow with a faulty action of his muscles. There was the man suffering from sleeplessness and fatigue and fear of consumption due to a night cough. He was found at the periodic medical overhaul to have a denture fifteen years old which was loose, and which slipped back into the throat, inducing a cough whenever he lay down. A new denture removed the cough and the sleeplessness; with it fatigue and the fear of consumption also disappeared.

Other physical maladjustments were found in people who had had good medical or surgical advice years before and whose condition, then wisely treated, now needed readjustment. The first example that comes to mind in this connexion was the man or woman with glasses which need changing. There was equally the man whose truss, prescribed perhaps twelve years ago, needed readjustment, or the man who, once fitted with surgical splint or instrument, in spite of abrasions brought about by its use, has gone on wearing it for years without reference to his changing needs.⁷ All these were easily remedied without loss of time or money to the individual. The readjustment was always followed by an increased sense of well-being and a slightly heightened sense of responsibility for himself and for his health.

These things in themselves seem trifling. It is not sufficiently realized by the lay public, by the employer of labour, or, indeed, by those engaged in the practice of preventive medicine in welfare work, how far-reach-

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ing are the results of trivial disorders. Every maladjustment has its influence, subtle though it may be, on the individual, and also on his environment. Even such minor conditions as an aching tooth, a pimple on the neck, a painful corn or cracked finger will be enough to wear down the buoyancy of an individual and render him prone to fatigue with its attendant ills such as bad temper, apathy and moroseness. When these conditions are continuously present in parents, they tend to overshadow the home and thereby to limit the range of the child's environment, as we shall see later. Where the aim of a medical organization is focused on the welfare of the child, as it was in the Pioneer Health Centre, it is imperative that it should embrace within the scope of its activities all those factors in the environment which lend themselves to amelioration—even the most trifling.

Psychological Maladjustments. What is true of physical maladjustments is still more true of psychological ones. The repercussion on the home of psychological disturbances in the parents is incalculable. The following case illustrates this point. One young and once good-looking mother suffered periodically from severe depression. She looked ill-cared-for in person, was careless in behaviour, and frequently contemplated suicide. In her small room of all work she was unable to manage the three children who clung about her skirts all day. She suffered from headaches. Her husband was indifferent and seldom at home. She had no friends. There was no prospect of any change in her circumstances. The doctor, on becoming aware of her state of mind through the medical overhaul of both husband and wife, advised her

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to seek companionship in the club at the Centre from 3 to 6 p.m. daily for rest and relaxation, and to bring her troublesome children with her and put them regularly in the charge of the Sister in the nursery. As a result of this very simple advice, after a few weeks she found that her children, being well content with the constructive play under the Sister's direction, were quieter. When she took them home at 6 p.m. they were ready to go to bed. The mother was thus left free for the first time for many months to cook a meal for the father on his return home from work in the evenings. Within a month the husband was heard to remark that a miracle had been worked upon his wife, for he said, 'She is more like the girl I married.' This was not said in the consulting-room, but in the club on one of the evenings of the week when, along with the other mothers and fathers, he and his wife had come together to spend the evening and join in one or other of the activities that were taking place there. This very change in the husband and the renewal of his appreciation for his wife acted as a tonic and stimulant well suited to lift her depression.

For this woman no advice and no treatment in the accepted sense of the word would have been of any avail. What she needed was the opportunity and the courage to enter again into a wider life. It was this opportunity which the Pioneer Health Centre with its periodic medical overhaul and its Family Club offered her as *a valuable means of treatment*.

Thus we see that in more ways than one the club was an essential of the medical organization. It cannot be sufficiently emphasized that the medical overhaul

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set in the atmosphere of a social Club gave the doctors a peculiarly easy access to the confidence of each individual member of the family. Moreover, the overhaul in such circumstances was free from the forebodings of disease and unassociated with questions of economic loss or gain; thus for the examinee nothing ominous seemed to hang upon it. Shorn of all ulterior motive, the overhaul presented purely an opportunity for the individual to improve his condition. This the working man took eagerly. With experience of insurance work, recruiting-officer's work, hospital and research practice, we can state that this was a unique situation for both doctor and member alike. Of much more importance, it created entirely new possibilities for the student of biology.

The far-reaching effects of maladjustment not only on the individual, but upon the whole family circle is further illustrated in the following case. A young man, father of a family, was suffering from disappointed ambition. Observations leading to this diagnosis were made by the doctor moving freely among the members in the social atmosphere of the Club. Here the doctor was able to note the man's attitude to his immediate and remote surroundings, to his wife and children and to life in general. His frustrated ambition was beginning to make him actually ill, for he was tempted to fly to dissolute habits for solace. An ambitious temperament cannot be crushed: it must be adjusted and directed into an outlet which is constructive rather than destructive. The clue to a solution in this case lay in a knowledge of the

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man's family. He had an intelligent daughter of 10 years old. Towards her we directed the father's ambition. What he could not himself achieve might well be reached through her. The ambition for the man's personal success was transferred into a concern for his child's success. But the idea alone would have been insufficient to confirm the father in constructive endeavour. The Family Club, however, gave him a suitable field in which to exercise his new-found ambition. He and his wife told their neighbours of their determination to give the girl a secondary-school education. They became friendly with other parents whose children were in secondary schools. Pride would have kept them from this earlier. He and his wife sought the social secretary's assistance in the choice of schools, and indeed in marshalling the family resources for the enterprise. From the elder child their minds passed to the young child also. From a family who, through crushed pride, kept themselves apart from their neighbours, they became sociable people exercising a healthy and beneficial example within the Club.

The above case illustrates how maladjustments in the individual, destructive in their effect if untreated, may be turned to good account in the furthering of both health and development. It also shows very well the repercussion of disorder, in this case a psychological one, upon the whole family and society alike.⁸

Whatever factors assist in developing the activities of the parents, simultaneously improve the environment for the growing children, who learn from the example afforded by the actions of the parents. But the influ-

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ence of the environment is yet more subtle. The now widened environment itself reacts upon the parents. New stimuli not previously appreciable still further enhance their activities. Again the child reaps the benefit. And so it goes on, till eventually the child itself begins to widen the scope of the environment for the parents. The circle is complete. The individual and his environment are inseparable. They are moreover in function reciprocally stimulant. To attain healthy action in the individual, the environment cannot be left out of account.

We had to ask ourselves how it is that minor disorders, which apparently yield so readily to slight adjustment in the early stages, become established conditions. We have already pointed out that the need for after-care of patients discharged from medical supervision during illness is a great source of maladjustment leading to future disease. We have also seen that the social conditions in which the artisan population is constrained to live do not offer the possibility of the necessary adjustment being made. The problem, however, lies deeper than this. Many ailments thrust themselves upon the sufferer's attention and yet nothing is done about them. Flat feet and carious teeth are notoriously of this kind. It would be thought that a man's own common sense would lead him to take the requisite steps for their elimination. It is exactly here that the mistake is made. It is assumed that because this sense is 'common' it is also universally exercised. Experience proves the contrary. Our problem in this connexion, therefore, was, how to evoke commonsense in the people. How were we to instruct our members so that they would make those

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natural adjustments which are born of what is termed common sense?

This problem which we set out to solve was part of the general problem which faced us in the Pioneer Health Centre, namely, that of education in the wide field of prevention of disease, and in the still more important field, of the development of health. How was this education to be achieved?

Experience led us to believe that the method of lecture and distribution of pamphlets was not sufficiently intimate to be suited to our people. Furthermore, we were of the opinion that the tendency of lecture and pamphlet distribution, as indeed of modern education in general, is to make people knowledgeable but not sentient. Knowledge spread thin over action in the absence of the appropriate emotional response is the fountain head of sentimentality. The purity of action which does not emanate from feeling is sullied and does not carry conviction. It is without power, for the urge lies in the emotional factor and not in the knowledge. We had to ask, whence, therefore, is sentience? It springs from within. As far as we know it is only to be called forth by the natural means of 'personal infection'. Continuous individual contact with a better example (more healthy action) is the only sure and natural method of which we are aware of stirring the feeling, which alone is capable of giving the necessary urge to action.

'Infection' with ideas under the name of 'rumour' or 'gossip' is a contagion only too well recognized as usually operating for ill. Is this necessary? it must be asked.

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Why not take advantage of this natural source of power for the spread of feeling and ideas, and turn it to some constructive end in promoting sentience, and thus render our people amenable to the influence of a tradition? In circumstances that would make this possible, our only function as monitors would be to discern and promote healthy action among the people to be educated much in the same way as an artist painting his picture defines and brings forward the significant features of the composition in such a way that his general scheme may become apparent. Our work was to stress, define and formalize that which was healthy in our midst so that, as he acted, each individual might understand the rightness of his actions and be fortified in their pursuance.

Every facility for this 'personal' infection with feeling and ideas existed in the Pioneer Health Centre. A mother, after having kept her appointment with the doctor at the welfare clinic, went into the club-room for tea, where she found her friends knitting, sewing and talking. All that took place in the consulting-room was passed from mother to mother in the course of conversation. An instance showing how this worked in practice in the Centre will be useful. While running our preliminary experiment we were anxious to see our members taking advantage of the more recently discovered protective measures against infectious disease. Vaccination for smallpox had largely fallen into disrepute and abeyance among the working-class population. We were anxious to establish a more reasonable attitude towards the newer forms of protection, such as

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diphtheria immunization and protection of certain individuals against scarlet fever.

To have called the parents together and delivered a lecture, or to have given a talk to the mothers collectively, would have ended in many refusing our recommendations and others possibly doing the doctor the favour of 'letting their children be done'. This would have been a fatal mistake from the beginning. We awaited our opportunity, which very soon presented itself in the form of one or two cases of diphtheria in the neighbourhood. One mother, a sensible and intelligent woman, had lost her first-born son of diphtheria some years previously; her second, a delicate little girl, was liable to fare ill were she to contract diphtheria. This mother was in a position to feel deeply about this particular matter. She therefore was selected as a medium for the particular educational campaign in view. She was told about protection from diphtheria, and the matter was discussed with her with reference to her little girl. She was duly impressed and went home to talk it over with her husband. But, before going home she went to the club-room to have tea, and there related all that she had heard and what the doctors proposed that she should have done for her girl. She told her friends in her *own language*, showing what she herself had suffered from diphtheria, so that in their turn they understood as much as they could *feel* through her. So the news gradually filtered down through the members till even the least alert had heard and understood just as much as she could grasp. Ten days later the girl's immunization was begun, and within one month

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from that date 32 out of the 35 children available in the Centre at that time for immunization were being immunized! Instead of the parents conferring a favour on the doctor, they themselves assumed the responsibility and voluntarily availed themselves of the opportunity for which they had paid through their membership subscription.

The point of this illustration is that the recommendation reached the members through an individual who had been chosen as a particularly suitable person for the spread of the specific educational idea to be disseminated. The chosen mother's interest in our remarks was manifest, and the fact that she acted upon the advice given afforded an example which was efficacious in causing the greater number of members to follow her lead. Where a method of conduct is urged either upon an individual or a group of people without reference to any particular problem, the recommendation usually assumes the aspect of a challenge and the whole 'cleverness' of the individuals to whom it is addressed is employed to deduce reasons for its refutation. Where, however, a recommendation is made to a selected person relative to his particular need, the example afforded by the individual following the advice influences the observer. The actions proceed from the feelings and not as a result of a purely intellectual operation on the part of the individual. In this case there is no challenge to destructive criticism. Furthermore, the observer recognizes the favour accorded to the selected person and is desirous himself also of being advised. So in this instance many who learnt from the woman what the

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doctor had said came later themselves for further and more exact information. By this time, more accustomed to the new ideas which had been promulgated, they were better able to take full advantage of the information available in the person of the doctor.

This method, though appearing somewhat informal and casual, was at one and the same time a mass, selective, individual and practical method of instruction. Most important of all as a method, it was efficacious. This method was that gradually adopted for all educational work in the Pioneer Health Centre.

By means of infection with ideas and feeling, it was possible to disseminate knowledge and at the same time to evoke a desire to act upon it. But, when an individual was induced to act, it was necessary that he should find at hand the information necessary to carry out his intentions.

The state of isolation in which the artisan of big cities dwells seems to have received but little attention. So complete is it that when faced with some quandary or difficulty there is literally no one to whom he can turn for information. We gradually came to recognize that his great lack and his great need of a wise and a competent friend to help and advise him are among the main reasons for his inability to make use of the social services already at his disposal. The isolation in which he is compelled to live is a specific source of disease, physical, psychological and social alike.

In the Pioneer Health Centre, in addition to the work that devolved upon her as a direct result of the requirements of the members as revealed by the medical

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overhaul, the Social Secretary assumed the role of Dispenser of Social Remedies. During the evenings any member perplexed by, or in doubt as to how to proceed with some undertaking, would drop in and have a talk while paying his weekly subscription. He would inquire how he should proceed to acquire the house for which he had made application, even suggesting that he would like to know how to address the L.C.C. for this purpose, or how to gain the ear of his M.P. for his urgent need. Artisan families are in some measure aware of their discomfort under existing conditions, but they have few ideas as to how to set about securing better accommodation. They are tempted by the local house-agent to deposit sums of money without any guarantee of service, or they are persuaded by the specious agent of some building society to entrust their savings to that institution in the hope, vain, as the events prove, of securing a suitable house at some future date. In all matters of this kind a knowledgeable friend can avert disastrous mistakes as well as assist the man and his wife to take advantage of opportunities around them.

In this advisory capacity the Social Secretary of the Pioneer Health Centre carried out much the same sort of activity as that which the social worker attached to the hospital carries out under the name of almoning. The difference between the two lies not in the nature of the work done, but in the juncture at which it is undertaken. The Hospital Almoner cannot meet the individual until after the disaster, and must exert her efforts (often necessarily extending to charitable assistance) to tide over trouble and avert further disaster. The Social

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Secretary at the Pioneer Health Centre met them *before* disaster had come upon them, and exerted her efforts in assisting them to promote their own welfare by their own endeavour. To apply the word almoning, which, from its derivation, implies charity, to the type of welfare work that was done by our Social Secretary at the Pioneer Health Centre would be running the risk of obscuring the issue. Just as in medicine there is palliation and there is prevention, so also in welfare work there are the same two aspects. These need to be clearly kept in view.

Between the Social Secretary and the members many matters came up for discussion, from housing to higher education of the children, even to the dyeing of last year's garments. In this way members were able to obtain information relevant to every kind of personal problem or perplexity. Furthermore, the information thus obtained was not restricted to the individual who received it, for what more natural topic of conversation in the club-room than the latest conversation with the Social Secretary? And what more natural than to infect others with the ideas newly caught? Thus this availability of information in itself proved a means of widening the outlook and activities of the parents, and enabled them to operate rather more fully than before in their own environment. They learnt where to turn in need, how to acquire what was necessary for the welfare of themselves and their family, and how to manipulate their slender incomes to the best advantage. This also is development of health.

In our search after health we had come face to face

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with disease in the great majority of those who came within our purview: disease thrusting and obtruding itself upon the attention of the sufferer, disease lurking hidden but insidious under the concealment of the compensatory processes of the body: potential disease and the probability of ill-health threatening from the ambush of limiting conditions and ill-ordered lives. We had been able to ascertain the nature of the social conditions to which our medical attention was directed, by means of the periodic medical overhaul supplemented by observations in the Social Club. These facilities had for the first time given us the opportunity of diagnosing not merely the nature of an individual's illness, but also that he was ill. The situation demanded more than this. We had to invent a means of influencing the social life of our members and of widening their environment, in particular in the home, the nucleus of the social life. To this end we made use of the family club and of the services of the Social Secretary as an integral part of the medical organization.

We have set out health as our objective, and it might be asked, why have we given so much attention to the diagnosis and treatment of *disease*?

The reason is that the only possible approach to fuller health is through the child, but the child must perforce be born and bred in the environment of the parents. This being the case, the first step necessary is to do all that modern knowledge can suggest to give us as a starting-point the healthiest parents in the healthiest home.

CHAPTER 3

PARENTHOOD AND THE HOME

THE IMPORTANCE OF THE ENVIRONMENT

THE road to health is a long one. The adult is already largely fixed in his habits, his power of reaction is probably already determined, and the scope of his personal development has its limits. He is already set. Up to his limits he may be helped to live to the full; beyond them the best that he can do is to know his limitations.*

With the child the case is different. The nature of life is such that it is perpetuated intact. The genetic bioplasm appears to be the last tissue in the body to suffer want under deprivation. A plant weedy and ill-nourished in arid soil will yet produce valid seeds. These seeds, derived from the starved plant, are capable of flourishing when sown in rich-conditioned soil. It would appear therefore that potential is transmitted intact. Is it some intuitive inkling of this great fact of biology which leads simple folk to look with some feeling akin to awe upon the new-born child? Perhaps the 'innocence' they would ascribe to it foreshadows its as yet unprescribed potential?

* Even this knowledge is power: limitations themselves can be put to good purpose.

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What does the fact of the transmission of potential intact to the child mean in terms of human development? It means that the environment may be of even greater significance to the child than the nature of the individual substances interacting at the conception; that is, than its inheritance in the strict sense of the word.

In making this plea for the major significance of environment in practical undertakings, we must point out that we would claim for the environment much that the supporters of the hereditary principle claim in support of their hypothesis. In the field of eugenics, experiments strictly controlled from the point of view of inheritance can be made, but even then the difficulty of eliminating the concurrent effect of the environment is almost impossible. The puppy born of a bitch of peculiar characteristics must perforce have lived *in utero* in the physiological environment peculiar to that mother. At birth it is fed on fluids peculiar to her physiology. In early youth it grows up acquiring the behaviour and characteristics of her also. The eradication of this source of confusion in experimentation on strict inheritance, with all mammals at least, is an impossibility. And yet reliance on the principle of heredity is still urged, as a means of improving the race, irrespective of the fact that besides the above sources of confusion there is added the insuperable difficulty of finding and isolating 'pure' human stock from which to breed! It is not that we wish to deny the possibility of differences in the chromosomes—the all-significant elements in the seed and ova. That these can exist is unquestioned. The point is that we are not in a position either to select or to modify the nature

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of the chromosomes. But once we have seen the extent of the influence of environment, the inevitability of its operation on the organism, and the stupendous effect it can have when exerted early upon the embryo, we then know it to be a power that is worth while handling. We can begin at once to modify the environment, and we have no knowledge as to how far such modifications may carry us. We cannot therefore but regret that enthusiasm for eugenics should occupy the attention of the practical Sociologist to the exclusion of an immediate effort to modify the environment in times of human need or national crisis.

For practical purposes the hope of improving on human inheritance, more especially bad inheritance which it is most desired to control, is a remote one. We do know, however, already that results of very considerable magnitude follow changes in the environment. For example, recent Californian statistics showed that the racial characteristics of foreign parents living in America were lost and the typical American physiognomy (including actual skull formations) acquired in one generation. The fact that such a remarkable change can take place within so short a time is in itself an observation of utmost value, quite apart from all statistical evidence adduced in its presentation.

The interesting work of Cammidge on the Mendelian distribution of sugar tolerance, and the fact that administering sugar by the mouth can overcome an obviously inherited metabolic disability, also take us very forcibly to the consideration of our ignorance of the power of the environment.

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For those who are concerned with the health of the child this outlook means that for all practical purposes the embryo, from the moment of conception, must be regarded as capable of balanced and coherent development, dependent *ab initio* upon the play of environment. Thus it is to the environment we turn in our search for health.

The fact that we gave so much attention to the adult calls for no explanation. We have seen that the grown individual is inseparable from his environment, and that any attempt to treat him as an isolated being is fruitless and unsatisfactory both to the doctor and to the patient. How much more is this so in the case of the child?

For many years the child is necessarily confined to the sphere of activity of its parents, dependent upon them for every type of nourishment it is to encounter, both physical and mental alike. Moreover, the earliest years are those in which the young and growing individual must suffer the maximum effect from a minimal stimulus. In common parlance this finds expression in the phrase that childhood is the most impressionable age. How much more is this true of the child before birth! So important indeed is it to protect the young embryo that a very special physiological provision exists to meet its delicate needs. The mother's womb, a protective veil cast about the delicate embryo, shields it from the ruder shocks of the maternal environment, permitting passage to the embryo of such elements only as have been filtered by the mother's body of their noxious and indigestible factors. Thus confined closely, the young embryo is immersed in the fluids of the maternal host,

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unable to derive stimuli from any other source. It is utterly dependent upon the parents for the earliest experiences that are to provide the wherewithal for its development and for its protection till the time when by living it shall be sufficiently experienced to deal with the grosser factors in the environment. First, within the 'incubating zone' of the mother's womb, and subsequently within the 'preserve' of the home, the young human must continue dependent throughout childhood.

These being the circumstances of its growth, in seeking the welfare of the child we had no option but to turn our attention first to the health of the adults, parents of the child, and secondly to the home, the child's environment.

DEFINITION OF HOME

There is much searching of heart about the question of the home. Some would have it that the home is a sphere dominated of necessity too rigidly by the parents whose (bad) habits of action and thought, already unavoidable, must inevitably permeate it to the detriment rather than otherwise of the growing child. They point to the evidence drawn from psychological clinics to adduce support for this theory. They propose as remedy the pooling of children at the earliest possible moment in order to avoid the impress upon the child of any feature peculiar to the parents.

To this outlook we are in fundamental opposition. Using the same argument, to wit, the inevitability of the parents' influence upon the child, we prefer to select

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that very fact and attempt to turn it to the best advantage of both child and parents. The embryo is nurtured by the mother within her womb. Nothing can reach it except through her. Little of harm can reach it because of the barrier of her physiology. The mother, *from what is at hand*, manufactures in her body what the embryo needs. So efficient, indeed, is her physiology that she has power, under stress, of converting her own maybe unsuitable food into nutriment varied and specific enough to fit it for nourishment of the embryo busied within the womb in elaborating all its rapidly differentiating tissues. Biological necessity has determined that the child's early environment should not only be intimate, but *specific*. The principle which biological necessity imposes upon the growing child physically, *in utero* and in lactation, we consider it unwise to reject lightly in later life. This principle should operate in the sphere of mental development also. Just as the embryo grows within the selective and protective mechanism of the womb, so the child must grow within the selective and protective mechanism of the home. We regard the home as the 'womb' within the shelter of which the mental and spiritual development of the child must take place. The home must be jealously preserved; nay more, it must be cultivated as being the *only* soil in which the young child can be planted and can grow naturally: the only sphere in which mental and spiritual weaning can take place specifically and therefore satisfactorily.

Before going further, it is necessary to define the sphere implied by the word 'home' used in a biological

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sense. It does not stand for a mere structural unit, the small area enclosed by bricks or concrete that usually comprises the dwelling-house of the artisan in towns to-day. Home represents a *functional field* the limits of which are determined by the range of the parents' free activity. It includes that family circle to which they belong, the friends and acquaintances they choose, the district they inhabit, the work they do; all, in fact, which might well be included within the designation of 'parental circle'. Thus home, bearing the impress of parental selection as well as of the parental fortune, essentially expresses a peculiar *qualitative* as well as a quantitative functional entity. Its extent and scope vary strictly in relation to the development of the parents who make it.

The next factor of importance in this connexion is the change that is being forced upon the home from without by developments that have come about in western civilization within the last fifty years, changes that are largely dependent upon mechanization. Let us see how these affect the home.

As physiology is slowly demonstrating, the first home of the infant, the womb, is a great selecting mechanism, passing on to the embryo those elements that have been sifted and modified by the mother's intervention. This role of selection the mother carries on during lactation as she produces, through the medium of her own bodily activity, food proper to the young child's needs. So true is this that only her *own* milk is the food properly adjusted at this time to her *own* infant. In lactation as in pregnancy the mother, eating what she can procure, is

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able to produce milk suited to the child's needs. Such efficiency is beyond belief: not only does the human machine elaborate the material, it also selects and is largely capable of converting unsuitable material into the required foods for the infant. The mother, primarily a physiological selective machine for the nutriment of the infant, becomes no less the medium through which the nutrition of the family in general is achieved. It is probably no coincidence therefore that the woman in history seems to have been responsible for the establishment of the homestead, a fixed point from which she could continue to select and operate upon the raw food-stuff available for the feeding of her family. These she derived from the earth and from her man, and upon them she exercised her selective faculties, accepting this and discarding that, till she was satisfied of the 'rightness' of each item.

Two factors guided the mother in her work of feeding the family. The first of these must be designated 'intuition'; the meaning of which we do not at present understand. Perhaps indeed for this reason the temptation to reject 'intuition' altogether would be irresistible, were it not that we have evidence of the extraordinary selective power of the woman's physiology operating in pregnancy. May there not be a physical basis even for 'intuition', some acute sensibility in the woman of physiological requirements? This point is worthy of investigation.

The second factor that assisted the woman in her choice of food for the family was the seasons. Each season brought and suggested to her appropriate food.

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Thus seasonal variations formerly forced upon the family an inevitable variation in the diet in the course of each year.

The last thirty years has brought about a vast change in the field of woman's activity. Mechanization has unwittingly robbed the woman of the homestead, and swept her into urban life. What are the consequences of this change?

The segregation of the people in towns has cut them off from a natural supply of food direct from the soil. In towns the sole source of food is now the shop. Coupled with this change is the discovery of new means of preserving foods, and new means of their transportation and distribution. The result is that the market is flooded with both new kinds of foodstuffs and with foods out of season. Moreover, many of these foods are specious and very deceptive. For example, dried or tinned milk which will not sour attracts the housewife in the summer, perhaps quite rightly. But in her appreciation of its convenience she loses sight of the fact that she is using a 'dead' product, in the place of the 'live' milk drawn from the cow, fed upon summer grasses naturally manured by the farm animals of the homestead. Again the housewife, intuitively or traditionally doubting the value of tinned fruit, may make an effort to buy, for example, fresh pears. So accustomed is she to seeing them all the year round, she forgets that they are seasonal fruit in this country. She does not know that the fruit she is buying is ripened not by the sun, but by artificial means in the depths of the ship's hold. Thus a 'pear' may be good food; it is not necessarily a *pear*!

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The change in the nature of available food is so rapid and so extensive that the woman is utterly bewildered. Once busied with minute care for every detail of selection and preparation of food for the family, she now inevitably permits herself to be guided by what the shop has to offer. She buys ready for consumption, or at least partially prepared, the greater part of that which is eaten in the home.⁹ In the place of her natural selective instinct, advertisement is ever at hand to instruct her in vociferous terms what it is advantageous to buy. The woman is tempted to follow this ubiquitous advice, the price of the article permitting, for she has a vague but clinging prejudice in favour of the superior quality of the shop article against that produced, perhaps a trifle less elegantly, in her own oven. Moreover, tinned goods, potato chips in bags and cakes premixed in the packet, demand but little trouble as well as the minimum of gas, a matter of importance to the artisan family. Thus the preparation and serving of food are a lost art. The whole family suffers. But the child, owing to the greater need for its growth and to the essential vulnerability of its as yet undifferentiated tissues, suffers most.

It is easy to understand that the child suffers from any poorness in the quality of the food on which he is reared. It is less often realized that he also suffers from the absence of any means of education in the art of feeding. Tinned salmon, tough and woody though it may be, is prized, while a fresh herring is scorned and rejected by the parents. The child, quick to imitate, tends to esteem the 'prepared' foods above those which are derived from

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more natural sources. His values are all disturbed. Requirements consequent upon the seasonal variation of his physiology have no significance, for he is uneducated in that direction. Whim and the shopkeeper become his guides to nutriment. The operation of intuitive and traditional selection is in abeyance. He is robbed by this procedure of his birthright, a natural education in the home.

It is of course unnecessary that a radical change in methods of conducting the household need be detrimental. In many ways the conditions of the immediate past are not to be cherished. Lack of air, light and freedom, and lack of a varied diet, incidental to urban life, from which children often suffered, led to much disease. Rickets, scurvy and anæmia, seldom seen in its most severe forms to-day, were common diseases fifty years ago. In many ways modern facilities undoubtedly work for the good of the populace. The multiple shop, distributing goods of equal quality without prejudice to all its branches in rich and poor districts alike, should afford an agency beneficial to the poor, who formerly had to be content with the poorer quality of goods to be had in the shops in the poor locality.

In many ways modern urban life offers far greater opportunities than formerly. The enormously enhanced display of variety in purchasable articles, clothes, utensils, labour-saving devices, all necessities of modern daily life, affords artisan parents an opportunity, hitherto unobtainable, of moving in a wider circle. This is a point of utmost importance for the enriching of the home.

We are faced with a peculiar position, one in which

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the markets, including the food market, are flooded with new articles and substitutes, the exact value of which is as yet unknown. Accompanying this is the disappearance of the old traditions and operation of intuitive selection dependent upon natural conditions, and its replacement by a disposition towards every form of labour-saving device, including labour-saving articles of food. It is not possible to say where this tendency is leading, but it is clear that there is necessity for close scrutiny of each new product in the light of fuller knowledge.

How is the artisan woman equipped for such conditions? The first factor of importance in her circumstances is the enormously increased leisure she has acquired as the above changes have been sweeping over her life. These very labour-saving devices have eased her labours in the house. The limit set to the size of the 'house' by the housing problem has curtailed her former activities. A woman with a 'house' of one and a half rooms cannot spend her day in keeping these in order even if she would. She spends the minimum rather than maximum time in the preparation of foods, as we have seen. She cannot conveniently do the washing at home, for there is often no water in her room, no sink and but little drying space. Unless she is a clever cutter and seamstress the ready-mades are actually cheaper for her, for she may easily ruin material she buys to make up for herself. She is driven in many instances to forgo all the activities which occupied her own mother. The significant fact is that through these means *leisure is being forced upon her*.

Now if the woman is using her enhanced opportuni-

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ties to increase her power of selection in discriminating quality, suiting her purchase nicely to its purpose, exercising judgment between economy and cheapness, and using her spare time in widening the sphere of her activities, nothing but good should result. But the trouble is that in the artisan home at the present time increased facilities are not operating on the parents in that way. There is no source of knowledge to guide her, and as far as we are aware no tradition being built up around the new conditions as they arise. What is the result? The woman's leisure is largely unoccupied.

Where the woman's tastes remain undeveloped, the home becomes flavourless and at a very early stage in marriage the interest of the man in his home wanes. He is presented by his wife with nothing capable of rousing his appreciation and co-operation. He is not stirred to acquire or to improve upon the things which she should have desired for their home, and quickly he becomes indifferent. The father's indifference again reacts upon the mother, and she in her turn does not make even the small efforts she may hitherto have made. Things slide slowly from bad to worse; each parent goes his or her own way, and henceforth the home is non-existent as a positive factor.

What concerns us is the result on the children of this 'disuse atrophy' of the mother's sensibility. The children are not presented in the home with the material upon which to experience and exercise their growing sensibilities, nor with the example of critical selection in operation in either parent. By this restriction in operation of the home influence they are again deprived of

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education they should have through natural means during the earlier years of life.

We have looked at the major outside circumstances affecting the home. Let us turn next to the internal circumstances operating within the home.

A home is not complete, nor indeed is the mutual relationship of man and woman complete, as we shall see later, without a growing family. Among the artisan population this is well appreciated. The artisan wants children and wants opportunities for their development. So far so good. What he does not realize perhaps is the subtle difficulties into which they almost inevitably lead him. It is not generally understood how strong are the forces threatening disintegration in the artisan home from the time of the birth of the first child. Up to this point the young couple, comrades in courtship, grow closer during the early days of married life. Their home is their common interest, their leisure hours their mutual pleasure. When conception occurs, the needs of pregnancy begin to tie the mother to the home. Lactation follows, and some months pass during which she is unable to go far from home. As the child grows it has to be carried, and ought to be brought home to bed at the time the young couple are most free to enjoy their hours of relaxation together. The mother is torn between the baby's interests and those of her husband.

By this time probably the second infant is on the way. Soon the oldest child goes to the day nursery, from 8 a.m. to 5 p.m. Later, when the elder children are growing up, their leisure is well spent first with the Brownies or the Cubs, later with the Guides and Scouts.

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The children indeed are rarely at home. By this time the father, having almost of necessity been left to his own devices during many leisure hours, has found occupations of his own. The mother, first tied to the house by the succession of infants, is now tied to it by habit acquired in the early years of marriage.

This tendency is being fostered by the absence of opportunity for the members of a family to enjoy their leisure together. The cinema is one of the few places of amusement the mother and father can frequent together. For the rest each spends the leisure hours separately. The integration of the home and the family is threatened from within and from without.

This concatenation of circumstances gathering about the artisan home had to be faced by any group of people setting out to further the health of the child. We could well undertake the medical inspection of the parents before conception and periodically after that time, but though by such means we might affect the physical environment of the embryo, this in itself was insufficient to enrich the total environment of the child. We had to look for some source of power great enough to move the apathy and ignorance threatening the home, and to stem forces tending to disintegration of the family.

In the Pioneer Health Centre we took advantage of the leisure of the mother, and opened the Club in the afternoons so that she might have the opportunity of widening her activities. In the Club she could make friends in a way impossible for her to do at home. She could learn to do things she no longer did at home, such as knitting and sewing. She could learn new

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recipes for the children's and for her husband's meals—and so forth.

Still more important, we used in the Pioneer Health Centre the increasing leisure of the man and woman as a means of enhancing the comradeship of the mother and father. For example, we undertook to look after the babies and younger children of the family on Saturday and Sunday afternoons in order to allow the mother and father freedom to go out together as they were wont to do before the first baby arrived. This was but a beginning. We had to look for a further means of integrating the home.

Psychology for the past twenty years or more has been urging, by fair means and foul, the undoubted fact that human power lies in the emotion rather than in the intellect, and that harm creeps in with the tendency to stir emotion by the subtleties of intellect. It was an emotional urge therefore that we sought to employ for our purpose. Nature has provided the animals and man, chief of them, with a deep emotional concern for their young. This in our opinion is a natural and pure urge, a power capable of being used for the development of the child. But what is the source of this emotion? It arises in the young couple as the result of the mutual attraction leading up to marriage. This, above all, is a time filled with idealism and enthusiasm great enough to carry the pair on to action. Before they are trammelled with the cares of an ill-adjusted home and the responsibility of many children, they are free and anxious to make the home a home of their choice. We felt that this was the moment to capture their emotion

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and to hitch it to the cause of health. Here was a natural *force* which could be drawn upon, canalized and used in the cause of health and the child. Thus in planning our organization this was the power we regarded as our greatest asset. Later experience confirmed us in its use.

In the young people, where habit unforeseen was likely to insinuate its predatory tentacles, we had to forestall it by knowledge and by providing them with the possibility of meeting other parents already operating to a fuller capacity within their circle. Thus, while keeping the family integrated, the medical overhaul and consulting-room became a source of information as to the meaning of health, and the Club-room and the Nursery, small though they were, became a field for the operation of example in the rather special atmosphere created and fostered by us within the family club.

The natural forces of emotion released prior to and during the early years of marriage could be utilized, but could they be maintained and extended in the cause of health? This was the next question to arise, and for some light on this subject we must turn to the mutual relationship of the man and the woman.

Biologically man, *homo sapiens*, is an organism embracing man + woman. In biology a functioning organism cannot be said to have independent parts. Different functions in an organism are represented by distinct structural entities, organs, separable from the whole by dissection; but these organs are incapable of function in isolation. No organ can operate on its own: it can only operate in the whole and for the whole organism.¹⁰ What does this principle involve when applied to man

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and woman? It means that the organism, *homo*, is the *unit* of humanity. The male alone is no more than an organ; woman likewise is but an organ of the living organism. Neither alone is capable of *significant* function.

Sporadic instances of the attainment of this functional co-ordination of man and woman are known to all. They are, moreover, intuitively recognized as 'right', and the resulting condition is regarded as the 'greatest happiness'. Perhaps indeed every individual has felt himself at some moment of his life on the threshold of this happiness, only in the majority of cases to discover himself almost immediately back in his former isolated sphere of action, thrust back into the 'larval' stage in which he rightly grew up in childhood.

In history records of the attainment of this functional adjustment in the human race are still rarer. Either one or the other sex seems always to have been supreme and dominant. There have been matriarchal states in which woman was dominant and imposed her will and interests on the community. There have been patriarchal ages in which man dominated and imposed his law upon mankind. *There has yet to come a homoarchy; a state wherein male and female will consciously function in balance as one organism with unity of will and achievement.*

Let us see what difference in dynamic is to be anticipated from such co-ordinated function. The exercise of the power of one sex without reference to the other must essentially mean that the powers of both are largely exhausted in mutual cancellation, as antagonistic crushing or resisting forces. But, where the two

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operate reciprocally as two organs in one organism their mutually stimulant action or mutual antagonism must emerge in a creative force greater than the sum of their combined individual powers. It is this dynamic we are attempting to search out.

We believe that the mutual co-operation found in courtship and early marriage foreshadows, not a comfortable convenience or mere pleasant companionship, but a possibility of specific mutuality of function resulting in a new outlook, in new power to do that which previously was impossible. If this is so, mutuality of function should be capable of development and prolongation throughout adult life in all its phases. Nowhere can this force ever be of greater significance than in the home.

We do not yet know how to achieve this mutuality of function in the human organism—*homo*. Intuition has ever demanded it; biological science leads us to deduce reasons in support of it as the fulfilment of the function of sex, and theory would lead us to suspect that without it there can never be full health either for the parents or for the child.

In the Pioneer Health Centre in the absence of enabling knowledge we had first to make observations. We had to sow this new seed of thought in the favourable soil of the family-club and watch its progress under conditions carefully devised to foster growth. From our hitherto comparatively short experience we reaped nothing but encouragement in this field of experiment. We find both the young man and the young woman eagerly straining after a fuller understanding of the deeper significance underlying sex.

CHAPTER 4

THE CONCEPTION OF THE CHILD

WE have seen that out of the mutuality of function of the couple recently married arises the urge to parenthood. The woman has always been supposed to desire children. Inasmuch, however, as children were synonymous with and inseparable from a home and a husband, the motives have been mixed and the issue confused. In the man the urge to parenthood has hitherto appeared to rest chiefly in the desire for an heir to inherit those things he has amassed around him. Thus he has been aware of a certain sense of futility in the absence of a son.

The motives leading to parenthood are changing. It is perhaps not so much that the old desires are waning or are lost as that they are undergoing evolution and are becoming fulfilled as the man and woman themselves develop a fuller consciousness. The human organism, man + woman, conscious of the creative force engendered by the interaction of its co-ordinated personalities, seeks its expression in the concrete form, that is in children. Thus the child, while still retaining the old charm, now holds a new significance. We have seen in the case of the young couple that the human

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organism seeks to surround itself with an environment which is the product of its mutual selection, a home of its choice. So also the human organism seeks to create that peculiar to itself which may operate better than it, and extend further than it into this selected environment. The child born of it and bred in the environment of its choice stands not for the perpetuation of the substance alone of one or of both, but also for the perpetuation of its correlated personality. The sentience, versatility, penetration, skill, harmony, the joy of the functioning organism, man + woman, all must be garnered in for perpetuation in the child. Where once the child, largely extrinsic to the parents, only represented the man's estate, it now represents the co-ordinated substance of a functioning organism, man + woman, in a peculiar and personal guise. The child has become intrinsic to their coupled personality. In this change we can trace development in the consciousness of the participators, man + woman, passing from a static to a dynamic comprehension. Whereas the parent was formerly concerned to hand on merely substance, now the couple, one organism, seeks to hand on function. Function engendered in the pair is perpetuated through the child. Thus, through the child, *homo* fashions the future. Whereas man was once content to dominate space, now integrated and conscious, the human organism prepares to invade time also. It would appear that in a very literal sense *homo* is extending its dominion—or, if you prefer it so—*homo* is in the process of still one further stage of evolution.

It might be said that the moulding of the future by

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man is scarcely to be welcomed; is it not through the will of man that have come wars, strife, greed, slums, unemployment, indeed all the unbeauty of the modern world?

Perhaps if the male element of humanity alone, with no better understanding than hitherto, were to set out upon a determination to mould the future, it were indeed vain. That is not the issue. It is the human organism, man + woman, that is becoming conscious of its power to fashion the future through the child. But, along with this development of the parental urge, there is arising a further development in the human consciousness. This is the *urge to responsibility*.

Responsibility needs definition. By derivation it means 'ability to respond'. It is a term bound up with physiological conceptions. It implies a tissue attuned to react to stimulus from without. More than this, it implies that balance or poise which permits the maximum free action in response to such stimuli. Lastly, it implies a tension within the entity which holds it ready for response. What is true of any tissue of the body is equally true of an organism as a whole. Responsibility implies the delicate poise of an organism about its own centre whilst versatile articulate relationships are maintained with each item of the environment. Action in an organism so constituted is instant upon the least stir in the environment. Hence the environment may be regarded as the stimulus proper to all action. The reliance solely on self-will or 'determination' emanating *from within the individual* has been obscuring the understanding of and the expression of responsibility.

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Self-will implies a turning-in of the personality with a simultaneous shutting-out of the universe, a suicidal tendency. Responsibility implies a poise dependent upon reactivity to the stir of every item in the environment.

Responsibility is a biological attribute of consciousness; it is of the very essence of health.

When we come to consider the question of conception, the outstanding feature of the situation is the abundant evidence that the human organism, man + woman, is beginning to exercise responsibility in this field of action. The child, fortuitously conceived more often than not, rose into the consciousness of the parents for the first time only after it was feared that pregnancy had undoubtedly occurred. To-day such a position is largely unacceptable. Often it is unacceptable to both parents, but almost consistently so to the woman.

Responsibility in action implies consciousness of the significance of that action. From some of the more recent researches in anthropology it would appear that there was a time when the human race was still unconscious of any association whatever between copulation and childbirth. The woman by magic, or some means entirely unknown to either sex, was she who could produce children, and doubtless through this very unique power rose to her matriarchy. Long has the emotional content behind this myth lingered in the not-yet conscious strata of the human mind. In man the expression of this emotional lag can perhaps be found in his so-called 'natural' irresponsibility in the sexual act. The woman is resentful of this, for by it she is placed in a position of passive acquiescence rather than one of responsible

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partnership in action for which she herself is ready. It is in this lag in the emotional content, and not in the alleged inherent baseness of human nature, that we find an explanation of the number of unwanted conceptions. In the frequency with which these things occur (which we know from medical experience) it is possible to trace a lack of co-ordination between the feeling content and the knowledge of the sex relationship. Every man and woman to-day knows the result of their mutual action, but not all feel it, are conscious of, are 'aware' of it. Once knowledge is balanced by feeling, the resultant action is a responsible one; it is, in fact, the reaction of health. The time is coming when parents will no more think of conceiving a child in a home that is in any way unordered than they would consider when their children are older taking them to a seaside resort where the climate is conspicuously enervating, the drainage faulty or disease rampant.

We are too close to the event yet to be able to tell what factors have been operating in bringing about this evolution of the consciousness which is of such peculiar significance. All we can see at present is that the change seems to have come from women. Woman it was in whose mind responsibility concerning the sex-act was first established. She it was who first refused to accept conditions as she found them. She revolted and set herself apart. Her struggle for independence was at the time mistaken for her end rather than for the first painful step to a new order of things. In the welter of her uprising emotion her actions may well have been inco-ordinate. They nevertheless emanated from her

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intuition of the immanence of a change which was to result in a still more highly developed and fuller interaction between herself and her partner, man.

This integration has yet to come. As we have seen, it may well be that the discarding of the old taboos on sexual matters heralds the urge on the part of the man and woman together to put away the adolescence of their race and to permit adult responsibility in this the most far-reaching of all human activities.

Can this be the case? If so, do not let us be afraid. Neither let us apply the logic of the past to the future. The significance of the changing situation lies in the striving of both man and woman towards integration into a functioning unit or whole. In both, the dawning consciousness of this necessity is stirring a heightened responsibility, or awareness, of new inner compulsions hitherto not felt. The human organism, now conscious of the duality of its nature of man + woman, is beginning to comprehend that, forcing its way into being, there is the urge and the power, through the child, to fashion the future.

* * * * *

This is the significance that underlies the burning question of Birth Control.

It is no light decision that has to be made, no decision capable of despatch by the popular vote swayed by considerations of convenience and expediency. It is indeed likely that we are wrestling with a medium through which the spirit of the human organism is struggling to a position of still greater supremacy. The goal has been sighted.

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It is in this new point of view that we must look for a guiding principle to lead us through the necessarily halting and distinctly difficult period in which humanity is at present stumbling forward. As surely as the staggering infant learns to walk resolutely, so the human organism, man + woman, will reach the goal it has sighted in the sphere of co-ordinated human action.

In the face of the urge of responsibility to action, controversies raging round technique, around the number of children in the family, around the family income, around national prosperity, around world population, even around what man or woman shall do with sensuality, become matters of secondary importance.

The practical issue concerning the question of conception is the development of responsibility in the human organism, man + woman, parents of the child.

This is what the Pioneer Health Centre stands for in the controversy on the question of the control of conception.

The question is no longer whether control is necessary. Responsibility demands it. It is, moreover, a literal necessity to ensure the healthy conception of the child as we have seen in an earlier section. Man is destined to control. The question is how this is to be achieved.

THE CONTROL OF CONCEPTION

There is but one means of control of conception which is efficient. This method is abstinence from sexual relations except for the purpose of conceiving children. There are people for whom this method is fully adequate. Moreover, these people are conspicu-

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ously of intellectual development and culture. In having the number of children they desire to have, their mutuality of function finds sufficient and satisfying consummation. Of this, experience can leave us in no doubt. These people lead a harmonious, full and satisfied life. Indeed, their only doubt is whether in their satisfaction they are abnormal, since they discover that their condition does not tally with that depicted in the popular mind or in many medical and quasi-medical publications.

The products of the sex organs are highly elaborated proteins, calling for output of energy in their synthesis and elaborization. Conservation of these products *in the face of full function* may well be an expression of a maximum biological efficiency. Moreover, in the evolution of biological species there is some evidence that an ever-increasing conservation of the sex-products runs parallel with a progressive development of brain substance. There is therefore some reason to believe that the human type illustrated may well be in the van of human development.

There is no doubt that the practice of abstinence except for the procreation of children is only natural to those men and women whose whole lives since childhood have been expressed through consecutive self-development coupled with expansive interests in a very wide field of activity. Their whole vibrant sensuality is gathered up in parenthood. Their peculiar rich and full response to the urge of parenthood is thus dependent upon their nurture as well as upon their nature.

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There is a second class of persons for whom abstinence is a satisfactory means of controlling conception. We refer to those whose physical type is such that they are not readily stirred to sensuality.

Auxiliary Means of Control of Conception. Nevertheless, just as two persons require neither the same food nor the same amount of food for their effectual nutriment, so no rule can be set out in the still more obscure subject of sexual relations. It is equally obvious that persons who do not find abstinence a possibility may nevertheless be normal in function. In these people the need for the responsibility has arisen into consciousness while the physiological constitution precludes the use of abstinence as a means of controlling conception.

For such people the question of the method of controlling conception becomes an acute problem. They have to make their decision as to how they propose to meet the situation. If they find their decision has to be made between more children, whom they do not want and who thus have no functional significance for them, or the use of some contraceptive, they are faced with a serious choice. It is better for the people in this category that they consciously control conception by auxiliary means than that they repudiate responsibility in parenthood. They form a category for whom the use of auxiliary means of controlling conception may become a necessity. They may comprise the majority for whom provision has to be made.

To add to these there remain perhaps the very few in whom sensuality is highly developed.

Thus we may set out roughly for consideration four

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classes of individuals : (1) those of enhanced psychological development ; (2) those exhibiting diminished sensual response ; (3) those exhibiting enhanced sensual response ; (4) all those not included in the first three categories.

It is quite clear with these very different types *all products of different circumstances and education*, that no one universal standard of action can be set out, even if a universal standard of morality could be proclaimed. Whether therefore the auxiliary methods of controlling conception are essentially good, bad or indifferent cannot yet be determined. The first difficulty that we have to eliminate is the idea that a contraceptive in a box is morally more harmful than crystals of cocaine in a crucible. It is in the purpose and the method of application of these things that the danger lies. For proper application we need skilled knowledge. In the case of cocaine our knowledge is full and adequate for use. In the case of contraceptives, however, this is not yet the case. There is no body of facts upon which to base a reasoned judgment.

The first requirement is to gather together the facts. This is where the difficulty lies. The necessary facts can only be gathered by those people who are in a position to give skilled advice to parents on this subject. Both the gathering of data and the giving of advice are subtle and delicate matters. They can only rightly be undertaken by the medical profession. The medical profession alone is in a position to devise efficient auxiliary methods of control ; to decide which of those who come asking for advice it is necessary to treat by the methods in

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question; to understand fully any pathological results of such methods; and to know what data are germane to the formation of a sound judgment.

Many individuals, in fact, belonging to the category of those not readily stirred sensually, nevertheless may appear highly 'sensitive' to sensuous impulses. The explanation of this is that fashion and intellect may and do operate to stir a spurious sensuousness in individuals. With such people the need for auxiliary means for the control of conception may appear on the surface to be greater than it actually is. The individual who thinks he is in need of mechanical assistance may in reality be only in need of a fuller understanding of his own physiology. How far this state of affairs, of which every practitioner is aware, is widespread is not yet known. This illustrates very well the need for skilled and individual advice to patients on the control of conception. It also illustrates forcibly the inadvisability of any attempt to broadcast knowledge on the question of birth control.

Specially devised circumstances are essential both for the giving of this particular advice and for the collection of data on the subject. Any control of conception must be the joint concern of both man and woman. Any organization devised to investigate this matter *must embrace both parents* equally. It is essential, moreover, to have complete and continued confidence of the parents under observation, both the husband and wife. This necessitates a medical organization served by a regular staff of both man and woman doctors. It is necessary to have some means of checking the results of the arti-

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ficial measures employed for control. Not only must it be known whether conceptions are being controlled satisfactorily, but the effect on the man and woman themselves must be observable, the physical effect, the mental effect, the spiritual effect. Is licence increased by auxiliary means of control? Is the woman disintegrated by their use? No one has yet been in a position to give any but a speculative answer even to these most obvious of questions.

The above considerations concern the parents alone. There is also the child. How far is the child in any way affected by auxiliary means of control of conception? This point is never laboured in discussion upon the subject of birth control. Yet surely it is the question of first importance. It is well known that there is at present no known means of controlling conception by auxiliary methods which has 100 per cent efficiency. Success depends on the intelligence of the user and the skill of the doctor recommending the device. Do we know whether in those cases in which the method has failed to prevent conception the child of the resulting pregnancy is uninjured by the attempted interference with conception? This question has not received sufficient hearing, and there is at present no answer to it. Nor indeed can there yet be an answer, for there have never been any circumstances in which appropriate observation on this point could be made.

For investigation of the whole subject of the control of conception a continuity of observation lasting over an extended period of years is an absolute essential. Patience is required for this: incomplete answers can

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only obscure the issue. All sections of the public, whether strongly in favour, whether strongly opposed or whether at present indifferent, must ultimately realize the gravity of the decision (whichever way it is they are going to decide) on this question and its urgency at the present time. We cannot as individuals nor as a nation delay serious search for an answer to this challenge. In the face of the absence of sufficient knowledge it would seem unwise to allow a sentimental though natural concern for the individual to precipitate the matter by methods of broadcast: still less to force upon the State premature action that may possibly prove later to have been both unnecessary and unwise.

The Pioneer Health Centre was so constituted as to afford just those conditions necessary for observation and experiment in this field of study. Staffed with a regular and resident staff of medical men and women, we already had, through the constantly recurring medical and social contact, the very complete and abiding confidence of the people. Furthermore, we were at some pains to create in the Centre an active environment in which the welfare of the child was the paramount influence operating on the parents: so that where advice on the control of conception had to be given it was given for the sake of the family and health. Lastly, we had through the means of a membership subscription secured a continuity of membership making possible observation over an extended period of years. All that we needed beyond this was the opportunity to continue and to extend this research on a scale of sufficient size to give reliable information, and the patience to await

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the accumulation of necessary knowledge upon which to base a sound judgment.

That conception must be controlled is a dictate of man's very essence. The application of auxiliary means for the control of conception is a medical matter. The proper use of such means can only be distinguished from improper use by those methods already known and tried in medicine; namely, by observation and scientific experiment. It would seem wise to withhold judgment on this matter until a sufficient time has lapsed to fulfil these requirements.

It may be said, 'Experiment in such a subject!' The answer to this is that while we delay to do so, men and women in the depths of their ignorance are experimenting upon themselves in this field, often, indeed, as the medical practitioner is only too well aware, to the imminent danger of the life of the woman, the health of the child and the welfare of the family.

The feeling for Responsibility on conception has arisen into consciousness before the power to attain it. This fact gives direction to our endeavour.

CHAPTER 5

PREGNANCY

MATERNAL mortality during pregnancy and confinement is much higher than it should be in this country, and is at the present time the cause of great anxiety to the public health authorities and to those interested in welfare in general. There is a small percentage of cases which, in the present state of our knowledge, are quite unpreventable, but it is not this type of case that is the source of public anxiety. It is the type of case that we feel instinctively should not have occurred which accounts for the greater number of maternal deaths. Researches have been set up for investigation and treatment and for discovery of means of protecting the mother from disease which she has already contracted and which is threatening her life. All this is good and necessary. But it is not all that can be done. Nor, if a long view is taken, is it the surest means of reducing maternal mortality. All these measures are directed to the cure and protection of the suffering mother, already ill. But it were better that disease should not have occurred at all. Thus there is another approach to be considered. Can the predisposition to disease be prevented? This, too, must become the subject of inquiry and research.

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The disposition to disease is naturally less where the past history of the mother's health is free from circumstances liable to have diminished her resistance and rendered her prone to attack. Nothing so predisposes to maternal death at confinement as an unhealthy womb. Previous imperfectly terminated pregnancies are a frequent source of disorders of the womb. Still more is this the case with abortive pregnancies, above all if these do not happen to be of a natural and spontaneous order.

The sense of responsibility, of mothers at any rate, towards the children they bear, is increasing. This explains the fact that the urgency of the desire to terminate as well as to avoid unwanted pregnancies is growing. In the first place we have to face the fact that the greater number of pregnancies after the first are not wanted *when they occur*. This we know already from our experience at the Pioneer Health Centre. It is, moreover, general knowledge among practitioners of medicine in all classes of society. Without exception we found that all the couples who were not by nature infertile were, before they came to us, using their own methods of contraception. These were almost without exception harmful and usually quite ineffective for the purpose. The pregnancies that occurred in these circumstances were the results of the failure of the methods used. This is a bad beginning for a pregnancy.

It is not the whole story. We find the women guard against pregnancy by periodic drenching of the body with drugs of different sorts. Often the drug used may be of a nature perfectly innocuous in normal usage, but

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these drugs can no longer be regarded as innocuous when taken in quantities calculated to bring about the re-establishment of the functional reactions of non-pregnant condition. As we shall see later, this means bringing about the death of the fertilized ovum. The mental reactions of the parents throughout this process are significant. Up to the stage covering the drastic purging (which is often superintended by the husband) no moral questions arise in the minds of the people concerned. Acute anxiety alone prevails and is shared by both parents. This sequence of events often occurs month by month.

With health in view let us look at one or more of the obvious implications of this train of circumstances. First, the mental life of the mother and father is a strained one, and this is doubly increased for the working-man owing to inadequate housing accommodation. Then follow the constantly recurring periods of anxiety, frequently coupled with a resentment on the part of one or other partner. Here alone are the antecedents of family disintegration, as our researches have made clear to us.

The physical aspect is no less unfortunate. So far as we know at present, the normal menstrual functions of the mother, once stayed owing to pregnancy, can only be re-established by the production of a miscarriage. Now a miscarriage is brought about by the death of an embryo, the embryo that in the circumstances we are considering was killed by a purgative drug. The purge or drug taken by the mother has therefore to be of sufficient strength to kill the embryo. That this is the

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case is not generally understood by the layman, which ignorance accounts for the absence of moral responsibility felt by the parents during this process of purgation or drugging with such things as 'female pills' not specifically illegal. If the process of drugging is successful, the womb, intolerant of any dead material, will in due course expel it. The menstrual cycle will then be re-established.

Before passing on to the possible effect of the above process on the mother, we cannot resist a speculation as to the possible results on the child should the mother just fail to kill the embryo. Having failed in these so-called simple measures, with most parents responsibility and moral judgment prevent any further measures being taken. The pregnancy is allowed to continue. From this moment the whole attitude of the parents towards pregnancy changes. The child once spurned is now welcomed. From this instant nothing is spared to give it every opportunity in life. It has never occurred to the minds of any one that the means that were just insufficient to kill the undesired embryo might have been, nevertheless, more than enough vitally to injure the now desired child. Here, indeed, is a subject for research in itself, but it demands a very specially devised organization for its pursuance.

What about the results of purgation on the mother? She may not be completely successful in her efforts. She may bring about only a partial miscarriage from which she may suffer from hæmorrhage for many ensuing months. This is one of the more fortunate mishaps, for it usually leads to her having appropriate

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operative treatment to evacuate the womb of its dead contents. But if the miscarriage is incomplete, there is always the danger that dead products will be left in the womb. These form a germ-bed than which there is no more dangerous antecedent to loss of the mother's life at any future pregnancy. It is equally possible that a purging or injury just incapable of dislodging the ovum from the womb could disturb its implantation in the womb sufficiently to invite danger in the coming confinement and during the puerperium.

Both for the investigation and remedy of these questions the same two insistent features of organization are again necessary, the confidence of the people and continuity of observation under natural conditions in a natural environment.

If, judging from our own experience, we are right in our estimate of the prevalence among every section of the community of this series of mistake upon mistake, which may so easily lead up to maternal mortality and morbidity, we have touched upon a serious source of disease not yet brought either to light or under control.

That such a state of affairs, cumulative source of evil as it is, can yield to the influence and guidance of practitioners of preventive medicine we know from experience gained in the Pioneer Health Centre. Provided the significance of their actions can be made clear to the parents, in our experience they will generally forbear from embarking upon a course as to the significance and perils of which they were previously entirely ignorant.

But as we have seen before, knowledge alone is insufficient to promote right action in the individual.

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Right action must be preceded by *right feeling*. In our opinion this can only be evoked by personal infection. Pamphlet and general propaganda imparting information alone are inadequate as a means of bringing about this change of feeling of the man and woman which alone can touch the root of the problem of maternal mortality and morbidity in pregnancy and confinement. To bring about this change of feeling by force of example there must be a focus of endeavour from which emanates knowledge, the light of which illuminates examples of men and women moved to healthy action by right feeling. Health in pregnancy cannot be treated as an isolated item. It is inevitably preceded by courtship and conception. Unless these are healthy, healthy conditions for pregnancy must not be expected.

In the Pioneer Health Centre we sought to tap the enthusiasm of the newly-married couple as the surest power to move the individual towards health. Thus the influence of the Centre was felt by the parents before pregnancy occurred. The fact that subscription to the Centre was payable weekly kept them in constant contact with us, and the fact that it provided them with periodic and free access to the doctor was most valuable in pregnancy. Where conception is anticipated and prepared for, pregnancy is no longer a burden and the parents are *both* concerned in its satisfactory progress. The mother comes early to make any inquiries she may wish to make, and delay till the moment of illness or of confinement cannot occur. Indeed, as our experience has shown, she and her husband probably come *before* conception to find out if there is any further preparation

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they can make before embarking on the creation of the child. This very action, and the forethought it entails, must of necessity lead to greater responsibility in founding and rearing a family than is at present the rule.

These conditions are just those which essentially provide the most satisfactory circumstances for the mother's confinement.

They are, moreover, circumstances which are equally favourable for the child. It is necessary to prepare the way for the pregnancy; it is equally necessary to take forethought for the rearing of the child. Many a mother is unable to nurse her children because neither her body nor her mind have been prepared to meet the new responsibility. Thus in the Pioneer Health Centre consultation with the pregnant mother was a highly important item of the work. Not only did the mother receive a specially thorough overhaul directly pregnancy ensued, but minute attention was given at that time to the small details of her personal hygiene and her home. For example, her habits of feeding were reviewed; any habits that predisposed to constipation were again carefully attended to; any idea that she would not be able to feed the coming baby (because, perhaps, she has fed none of the previous ones) was gradually dispersed by both physical and general means. What in the ordinary course of events cannot be done after confinement was achieved imperceptibly when the mother was taken in hand as soon as the pregnancy was established.

Advice may be given, but it need not be taken. Responsibility felt by *both* parents can alone ensure its acceptance and bring pregnancy to a successful fulfilment.

CHAPTER 6

THE INFANT

IN the case of the new-born child we begin to tread more familiar ground. The principle of prevention in medicine has now been in practice in infant welfare work for a generation. Its central idea is fairly well understood by the lay public. The method consists in the admonition of mothers (and of fathers, too, where they can be induced to come) by a competent doctor who is available for the holding of consultations and the giving of advice on infant management and training at regular intervals. Its essential idea, that of education, is fairly well understood by the lay public. To the intelligent mother this type of medical service is of great value. Nevertheless, the best organized infant welfare clinics suffer some limitations.

All infant welfare centres have a difficulty in achieving a sufficient contact with the father. In individual cases this is partially overcome, but in the main it is accepted by the people that the baby clinic is a place for the mother and very distinctly no place for the father. This implies that in the training of the child any influence that can be brought to bear through the infant welfare centre is concentrated upon the mother

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only; the father, and the home, important as being the environment in which the child grows up, are for all practical purposes beyond reach.

A second serious difficulty in medical welfare work in general is that, unlike the practitioners of therapeutic medicine, the practitioner of preventive medicine has not yet found it imperative to live among his people. It is easy to see how this custom arose, for the aim of welfare work is to deal with the forerunners of disease and prevent its onset. Thus, unlike his medical colleague practising therapeutic medicine, the practitioner of preventive medicine is not in contact with cases that are emergencies in the sense of being in danger of death. It is however important to bear in mind that what is not an emergency for the doctor concerned with therapeutic medicine may nevertheless be an emergency for the practitioner of preventive medicine, as we shall see later. The welfare doctor comes on stated days, at stated times, and leaves at an equally stated time, often not to return till the next week. During this lapse of time many things may happen of grave importance to the infant under his care. The mother may be upset by a visit from the grandmother, who says the child is not getting on. The mother, thoroughly alarmed by the supposed wisdom of her elders, rushes to a busy practitioner who, too occupied by urgent sickness, has no time to examine the mother and baby, neither of whom he considers actually sick. He discharges his duty not to let the baby starve by recommending an 'approved' patent food, to be doled to the baby from a bottle. The baby, like the average human being, is disposed to

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be lazy. The bottle's teat is pierced with a large hole. The specious artificial mother's milk pours readily from this new source, more readily, to be sure, than from the natural source. From physiology we must infer that some effort in obtaining food renders it more nutritious. The breast-fed infant has to work for his meal. This effort is healthy. Ease dulls the senses as readily in infancy as in old age. The mother, knowing that the welfare doctor will not approve of the bottle, stays away till the matter may safely have passed beyond argument. The baby has lost its natural food and with that the natural protection acquired through a healthy and vigorous mother, to say nothing of the fact that it is laid open thereby to other evils of which at present we may only guess. This could all have been avoided had the welfare doctor, at the moment critical for his patient, been as available as the general practitioner.

The third serious limitation of the infant welfare organization lies in the lack of continuity in attendance. There is no obligation to attend constantly and regularly other than the interest and sense of responsibility of the mother, which may well be small or absent. The consequence is that there is a tendency to come when something is needed that the 'Welfare' is known to provide, or else only in an emergency. The patient's attendance at the welfare centre is as irresponsible and sporadic as is that of the part-time doctor, and the idea of prevention in medicine is defeated.

A fourth common limitation of the infant welfare organization is that there is neither time nor opportunity for the special examination of the mother, and any

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treatment necessary for her is beyond the scheduled scope of welfare work.

One of the very common causes of falling off of the mother's milk is a protracted puerperium with prolonged uterine discharge which seems to drain the mother's strength and spirit. A private doctor, particularly a man, is reluctant to make the necessary examination unless the need is urgent and pressing. The hospital gynæcological department, not having supervised the confinement, is not conspicuously interested in conditions regarded as the obstetrician's leavings. Hence this mother's efficient and speedy treatment is apt to hang fire, and the baby suffers consequent deprivation. Still greater is the difficulty of securing efficient treatment in the more insignificant ailments of the mother, headache, 'nervousness', 'weakness', piles, chronic constipation, all of which have their inevitable reaction upon the nursling.

These difficulties we were able to eliminate in organizing the Pioneer Health Centre. We did not cater for the mothers only, but for the whole family, so that automatically the father was well known to us and he also was open to admonition on behalf of the children from either man or woman doctor.

We were available daily, so that when the emergency occurred there was no tendency for the parents to stay away. The natural thing to do when in trouble or doubt was to come at once to the Centre and make an appointment forthwith to see the doctor. If the milk was beginning to fail, there was ample opportunity for the mother to be re-examined and advised as to her

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general health before any question of taking the baby off the breast could arise.

The necessity of paying a weekly subscription and, as we shall see later, many other reasons brought both the parents to the Centre constantly, so that regular attendance at the Pioneer Health Centre was almost more difficult to avoid than to maintain. Both mother and father fell into the habit of consulting the doctor about the young infant's progress and gradually both began to understand that his standard of health was likely to be enhanced by the laying down of good habits from the beginning.

The limitations to the scope of infant welfare work consequent upon the difficulties surrounding the examination of the nursing mother were overcome by her automatic attendance at the Post-Natal Clinic on her return after confinement. Here the hygiene of her puerperium received attention. The mental condition which so frequently preceded the alleged falling off of the milk was forestalled by building up the mother's health. Furthermore, any defects or *sequelae* of the confinement in the mother were adjusted, or the necessary treatment arranged, at a time favourable to herself and the baby. The long years of discomfort and suffering that many mothers undergo as a result of previous confinements were prevented at the earliest possible time after the injury.

The importance of a small adjustment cannot be sufficiently emphasized in the practice of preventive medicine. It may prevent a long sequence of events that will militate for evil not only on the life of one

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individual but to a lesser degree on all those around him.

What is true for the adult is manifoldly true for the child. The younger the child, the more insistent the consequences of injury and limitation of function. A child injured in infancy loses that which it might have experienced from the stimuli reaching it from the expansion of its environment frustrated by the original injury or limitation.

‘Give us a child until he is seven’, said the educators of the past; and biology is now beginning to demonstrate the truth of that saying. But a small thing suffices to turn the course of the young shoot recently burst from the seed’s protective husk; how slight an injury will destroy essential structures when directed upon the slight, loosely constructed and almost homogeneous growing shoot. In the bringing up of the child the principle is the same. It is the apparently insignificant habits of the parents and the home which, at its most impressionable age, determine the direction of the child’s growth and set the tenor of its future action. For example, the spirit in which the mother *for the first time* lays the baby in the weighing-basket may determine the subsequent reaction of her baby to that process. Tremulous hands of the mother transmit fear to the baby and there follow tears. The next time the basket alone may be sufficient to recall the memory and tears will follow whether the mother be present or not. The association, fear, basket and tears, is already present in the child’s brain hungry for impressions. What, for the child, is a hindrance to the acceptance of experience, is for the

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mother food for smug self-complacency. She does not understand why her baby cries. 'Poor little dear, he's highly-strung; you can see it already. But there, I suppose it's only natural: I'm rather highly-strung myself,' says the mother, with a tinge of pride. Alas! Only too natural, we fear.

It is possible to begin to abolish fear in the mother before the child arrives. Where she can have the opportunity of moving freely among babies and young children she becomes accustomed to their management and to handling them naturally. Thus a baby becomes a familiar thing and no longer 'precious' in a sense bad for the child.

To this end in the Pioneer Health Centre we took steps to prevent such attitudes as fear in the mother, with their inevitable repercussion on the child. A woman whom, from the medical overhaul, the doctor realized to be of a nervous temperament, was directed at the time of her first visit to the Ante-Natal Clinic to attend the Infants' Nursery.

Under the Sister's guidance among the infants in the nursery she could acquire a better attitude of mind than could ever be taught by pamphlet or lecture. In our experience intellectual forms of admonition only increase seriously the anxiety-neuroses of this type of young expectant mother. Knowledge is hollow where it is not backed by experience and feeling. Feeling cannot be derived from any intellectual exercise. The purity of an action resulting from the intellect in the absence of an emotional urge is suspect. Moreover, it is usually unconvincing. The energy behind action lies

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in the emotional factor, not in the knowledge which is, after all, but the emotion's raiment. It is incumbent upon us to ensure that the knowledge we may give, be it rich, elaborate, plain or poor, still clothes a man, and not merely drapes a puppet.

At the Pioneer Health Centre the nervous young mother, following the example of the Sister in the Infants' Nursery, learnt courage in the handling of children by practical experience. Courage is as infectious as fear. The courage she had learnt was thus handed on to the infant. When her own baby was born the focus of her attention was already directed into healthier channels than would otherwise have been the case. Bad habits of mind were not merely nipped in the bud. They were never allowed to bud at all.

Thus in the case of the infant the practice of preventive medicine reached its full expression.

CHAPTER 7

THE CHILD UNDER SCHOOL AGE

It has been shown in previous chapters that the mother and the child up to the time of weaning are, for all biological and medical purposes, one individual. The significance of this has only become apparent from the physiological research work of the last ten years. The child thrives, literally, at the expense of the mother. Two features of the mother's physiology must be noted in this connexion.

Food is taken by the mother and modified to meet the explicit needs of the growing infant first through her blood and then through her milk. All foods must be looked upon as foreign substances, strange and inimical to the infant. The infant has to learn to deal with them little by little. Thus weaning is significant. Weaning is the introduction of the infant to foreign foods not previously adjusted by the mother. Minute and carefully regulated doses of these potential poisons must be administered until the child has learned to deal with them by itself. Skill in weaning is essential: it is more so now than ever before, since the nature of available foods has been altered by modern conditions. Even cow's milk, originally selected by the woman's

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intuition as the nearest to her own milk and therefore the least foreign to the infant, is no longer what it was. It is sold dried and dead or stored and sterilized owing to the necessity for preservation and transport. Knowledge and intelligence, therefore, must come to the aid of intuition and do something to overcome the changes in the child's foods, and to bring them back to a more natural and 'live' state.

There is a second and no less important factor to be noticed at this critical period. Hitherto the infant has had all the reserves of the mother behind it for the supply of such things as vitamins and internal secretions. So much is this true that if the mother is ill-nourished, nay even starved, her physiology is such that the milk is the last to suffer from the deficiency. In a healthy state the suckling infant builds up from the mother's milk a large reserve of peculiar and special substances necessary to carry it over the first steps of independent life. If the mother is impoverished, the suckling infant only gets from the mother what is immediately necessary; no 'reserve' is built up. The child is therefore forced to depend entirely upon its own capacity to manufacture and store these things. Thus it is from the time of weaning onwards that the doctor is first in a position to detect the gross deficiencies hitherto masked by lactation. After weaning they begin to appear, e.g. cretinism, mutism, rickets, avitaminosis, etc. For these reasons the period of a child's life following weaning needs the greatest care and attention.

But in dealing with delicate physiological balances of the order to which we refer, the medical man cannot

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afford to wait until the deficiencies are manifest in the consulting-room. The finer and subtler indications of deficiency can be detected by studying the reaction of the infant to its mother, to other children, and to other factors in its environment.

It was for this reason that we planned the Children's Nursery as a field of observation for the earlier detection of disease. Hitherto the opportunity of making observations of this order has not existed, except upon the child already noted to be abnormal. The alleged healthy child as a rule receives no attention in this direction till, perhaps at adolescence, he is found to be too dull and clumsy to be acceptable in the Services or stupid enough to become conspicuous in Industry. By the time that the conditions have become florid it is too late to do anything. It is the insidious stage of these deficiencies that demands study. We must not wait till the school doctor can decide that a child is backward or imbecile. The steps of development cannot then be retraced. Two or three steps in the wrong direction in infancy lengthen quickly into a giant's stride. Downhill is easy running for both body and mind.

In development every inch is an ell. Development is not like an addition sum to which items can be added at will and at any time. It is more of the nature of a geometric progression or compound interest. It is not simply that a stimulus to action not encountered, or refused at the moment, is less readily appreciated, less potent or more difficult to respond to afterwards. That is true enough: but there is more than this at stake. A stimulus to action received, accepted and acted upon

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at any given moment is, in a very real sense, 'digested' by the intelligence of the individual. It becomes something other than it was before. It is, in fact, elaborated as 'food'. When digested it is altered and converted into some previously non-existing constituent of the intelligence. It becomes an intimate part of the individual, as capable of bringing about growth of the intelligence as, for example, is a specific food capable, after digestion, of bringing about bodily growth. Or, in physiological terms, the process is comparable to the changes that take place in a food protein when it becomes converted into an endogenous protein of the body metabolism.

After action has taken place, the sense-appreciation, which is responsible for the recognition of a particular stimulus, is heightened and the power to react to the stimulus is strengthened. On the next occasion not only the same stimulus but a wide range of similar stimuli are recognizable. Recognition of all these is quicker and more discriminate than was recognition of the first generic stimulus. Moreover, reaction to stimulus is more discrete and less wasteful of energy. Not only therefore is another fact added to the experience, but the experience itself is enhanced and particularized.

The effect of the operation of this process of natural mental digestion is to place the individual in a position to appreciate and to react to a new field of stimuli. These would not have come into the ambit of his appreciation unless this differentiating process of his previous experience had occurred. On the morrow he lives on a new footing and different plane from that of his previous existence.

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If a child is cut off from a sufficient source of new stimuli in youth, he fails to grow in intelligence. An attempt to provide later the stimuli that were lacking in earliest youth is of little avail, for, not having used them earlier, he has neither the receptivity, the agility, nor the plasticity to assimilate them now. This has its counterpart in physical growth. It is useless to hope to counteract the effects of starvation and deficiency occurring in early childhood by supplementing the diet in adolescence. Something can be done, but the set of the stature is already determined and cannot be disguised. Rickets is induced by a specific deficiency. Cod-liver oil given to the infant makes good this deficiency. But no amount of cod-liver oil added to the diet of the adolescent can straighten the misshapen bones. The child dwarfed through inadequate diet in infancy cannot now reach full stature or perfect growth in manhood.

The intelligence, like the body, grows by assimilation of food from without. The 'food' of the intelligence is stimuli derived from the impact upon the individual of factors in the environment. It is as necessary for growth of the intelligence that the environment be sufficiently varied as we now know that it is necessary for the food to be varied to permit of bodily growth. Without variety in the environment growth of the personality is impossible. As with food for bodily growth, so in the environment quality is as important as quantity, if not more important.

The nature of the environment is thus of paramount importance to the development of the intelligence and personality. This is largely obscured by the prevalent

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conceptions that surround heredity. It is very generally believed that the 'set of the stature' is evidence of an inherited factor and, indeed, it looks very like it on the surface, for the starved child has grown up in the environment produced by starved parents! Either hypothesis would appear valid until it is observed that by changing the environment early enough, so-called inherited factors may fall away. We do not yet know the extent to which this applies. As we have already seen, it forms one of the subjects of our research.

The younger the child when he comes into contact with a rich environment, immeasurably the greater is the result on his personality. If we wish to improve the standard of our people's development, *we must begin with the Home and in Infancy*. School age is already too late if we are to work economically and to work for the maximum results.

In a previous section we have set forth the serious limitations that are circumscribing the modern home. Since the development of an individual is so dependent upon the circumstances of infancy and early childhood, this is a matter of greatest concern for the child.

To take the child out of the home earlier and earlier in its life, as is at present the tendency, is in our opinion no solution to this difficulty. It seems that, while improving the quality of the environment for the child, we are passively accepting the complete disruption of the family. We are doing nothing to enrich the home which, after all, must be the paramount influence in the child's life.

We have seen that under modern conditions leisure,

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previously unknown to the housewife, is now being forced upon her, and that in many cases the mother is at a loss to know how to employ this leisure. At a time when she is able to widen her outlook she finds herself more and more cut off from contact with friends owing, as we have seen, to the circumstances of crowded urban life.

Thus the problem before us was how we could make use of the mother's increasing leisure so that the home and the child might expand simultaneously.

To meet this end we arranged an Afternoon Nursery, held daily at the Centre from 2 to 6 p.m. This Nursery was open to all the children of member-families. On arrival at the Centre the mother took her children to the Nursery and left them under the Sister's care. The mother herself went to the Club-room. Children were only admitted to the Nursery as long as one or other of the parents were in the Club at the time. This meant that the mother had a natural inducement to come to the Centre frequently, where quite naturally she dropped into her place in the social life, made friends, came into contact with new ideas, and, most important of all to us, came under the influence of the traditions of responsibility quietly growing up among the members. As we shall see later this simple and natural measure carried with it far-reaching results in the home.

In the Afternoon Nursery, as in a 'Day Nursery', the child came into contact for the first time with ideas unfamiliar in its own home. The games played in the Nursery were games the mother would not have thought

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of devising; though of the simplest and the cheapest, they were of absorbing interest and of such an order that they tended to the development of the senses and the co-ordination of the child. Then there were organized games and songs in which all the children took part together. These activities called forth in their accomplishment some disciplined action of body and mind. They allowed of the concentration and absorption so natural in a young child, but which are utterly impossible in the confined, crowded, confused and harassed circumstances of a two-roomed home, in which atmosphere so many children spend the first five years of life.

The Afternoon Nursery in the Pioneer Health Centre served two ends. The first of these was the use of the Nursery as an aid to diagnosis. As we have seen, the consulting-room, necessarily fraught with a certain strangeness and unfamiliarity, is not the best place to observe the young child. Nor indeed can we derive from the child, while stripped and stationary in the consulting-room, all the information that is to be gleaned about its growth and development. The child must be observed in action; attention must be given to gait, posture, balance, speed of reaction, dexterity, speech, and so on. In these matters lack of development, deficiencies, maladjustments, manifest themselves a long while before the incapacity observable in the consulting-room supervenes.

As in the adult, so in children, cryptic disease may be present. This may or may not be detectable by routine examination; usually it is not so with children. Transient manifestations of disorder which the adult might

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note, even if he were ignorant of their meaning, may pass quite unnoticed in a child. These manifestations of disease are, however, recognizable by the doctor from observations made in the Nursery.

There are to be taken into account also at this age the reactions of the child to its environment, to its mother, its brothers and sisters, and to its playmates. This can only be done in some field in which the child is free to act without consciousness of being observed. A child may have habits which a mother would prefer not to disclose. One such child was a 'biter'. She had a habit of suddenly biting other children without cause. In the Nursery this could not be disguised. Furthermore, the progress of such a condition under appropriate treatment could be nicely gauged in a way impossible at a stereotyped consulting-room visit.

Thus the Afternoon Nursery was first an aid to diagnosis. The second purpose it served was that of a remedial measure. If a child were slow in speech, often association with other children in the Nursery would hasten development. One mother of an only child complained that he seldom attempted to speak. A few weeks daily attendance at the Nursery brought about a remarkable change. The child wished to speak with the other children and thus began to make the necessary effort. With the mother there had not been the same necessity, for she had been in the habit of forestalling his wants before he asked.

If a child was noted to be clumsy or lacking in dexterity, the Nursery was a satisfactory place to introduce him, under the Sister's supervision, to little games care-

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fully thought out to exercise the particular faculties in which he was backward. Likewise the Nursery was a field in which to demonstrate practically to the mother of any child who needed special attention, the little things she could do to counteract bad habits and functional disabilities. It is possible to advise mothers in the consulting-room about the management of their children, and to leave them with nothing but *heightened anxiety and self-conscious trepidation* about the child. But, where the advice is given in *practical* form, for instance in a visit to the Nursery to see some specially devised 'play' he has learnt to enjoy through the Sister's knowledgeable handling, the mother goes home and carries on straightway the procedure that seems now so simple to her.

Where the training of the child was conspicuously bad in the home, and the child spoilt, or the mother was lacking in any idea of how to manage the children, regular attendance of the mother with her child became incumbent as one of the medical requirements of serious membership. For this mother's child the prescription given at the time of the child's medical overhaul ran : R Nursery, 3 to 5 p.m. three days weekly; 1 month: rep: pro re nata.

From experience we have found that in the child health is also happiness. The mother, at first compelled to bring the spoilt child to the Nursery by the doctor, is next compelled to come to the Club by the child himself. He first screams at being brought to the Nursery; later he screams at being taken away; and finally he may arrive at the philosophic condition of accepting

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with interest and enthusiasm that which each hour offers, a condition natural to the child whose environment is pre-eminently healthy.

The Nursery had a stimulant and restorative action on the child unaccustomed to any order in the home. On another class of child, subject to the depressing restrictions found in some homes where there is an only child, or old and infirm parents, the Nursery had a releasing and freeing action. For many children it became a satisfactory field for their first introduction into social life.

One of the most constant disorders that begins to be manifest at this age is the spoiling of the child. The parents themselves are too often responsible for the spoilt child. Where it is found that the father rather than the mother is to blame in this respect, in ordinary Infant Welfare Work the doctor runs up against a blank wall. The father, if not beyond reach, is not in sufficiently close contact to yield to reason. The management of children cannot be taught by argument or sermon; it is the 'sense' of management that it is necessary to impart. The parents must feel the rightness of the demand made upon them by the doctor, and in our opinion this can only be achieved by some natural means of bringing them together into an atmosphere where responsibility is being felt and practised by a majority of parents. The following example will make this clear : In examining the younger children of a family we found that they were often suffering from lack of sufficient sleep at the proper time. A child of four was up to 9 or 10 o'clock at night, and consequently was allowed to lie in bed until

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9 or 10 a.m. the next morning. Although somewhat ashamed of this, the mother could not deny it. She finally confided to the doctor that she could not alter the condition of affairs, since the father insisted on having the children taken up out of bed on his return from work. This situation was easily overcome by an organization such as the Pioneer Health Centre where the member-families met constantly in social life, all in knowledge of the tradition maintained in the Centre. Moreover, at the Centre the man doctor was in close contact with the father, and could speak with him as man to man. Satisfactory co-operation existed between the doctors, the Sister and the parents. Frequently indeed, with the Sister's full consent, fathers have been found spending the afternoon of their half-day with the younger children in the Nursery!

It is clear that the Pioneer Health Centre, organized as it was on the family basis, overcame the insuperable difficulty of Infant Welfare Work, namely, the isolation and inaccessibility of the father. An Afternoon Nursery for children, whose mothers are in the building, affords just sufficient relief and relaxation for the mother from the worries and exhaustion of the undisciplined children. This in turn finds its repercussion on the father who, on his return home in the evening, is still more than anxious to enjoy his wife's company and appreciate her interest in their mutual concerns. Often and again, had he not lost just these things, the home might not have lost him, to the detriment of every one concerned.

The Afternoon Nursery has been shown to be both a

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means of diagnosis and a means of treatment of the child after infancy. It is more than this. The Nursery commands the co-operation directly and indirectly of both mother and father. By opening up new fields of contact for them and for the child simultaneously it promotes the concurrent development of the home as well as the child at the time when the latter is ready to make its *début* into a social life.

In the minds of the members the Afternoon Nursery came to be recognized as an integral part of the medical organization. Besides this, for the organizers, it was recognized as being an adjunct to the home, assisting in developing a fuller social life for the parents and for the child.

But if we are to use a children's Nursery as a means of development, why, it may be asked, restrict it to the afternoons? Surely a half-day Nursery is only half as good as a 'Day Nursery'! With this we must fundamentally disagree, as our own approach to the subject is health, and health alone.

The Day Nursery is a nicely conceived and attractive measure to meet the press of economics on modern conditions. It is true, indeed, that some mothers are obliged to go out to work, and that help must be extended to them for the sake of the child, if for no other reason. Where, however, health taken in its broadest sense is the consideration, we do not consider that the requirements are fulfilled by any agency that takes the child more and more from the home and *does not simultaneously take steps to heighten the responsibility of the parents and widen the activities of the home.* There is

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always a danger that the public may unconsciously allow expediency to precipitate it into circumstances which tend to frustrate and obscure the subtler needs of life.

In offering the Day Nursery to the artisan and his wife we think there lurks the subtle suggestion of yet one more sacrifice the working man is to be asked to make in the cause of Economics. In an earlier chapter we have seen that the provisions which were necessary and possibly satisfactory where the cure of disease is in question, are nevertheless inadequate or even harmful where health is the aim. The same is true of the education of the child. Parents may be steeped in trouble due to deprivation, misfortune and apathy, so that for the sake of the child something must be done to remove the burden from those parents who cannot attempt to carry it. But, speaking generally, we must steadfastly withhold this palliative from the majority, especially from the young and vigorous.

We have discovered from experience that young parents want to take responsibility in every direction for their children. They do not know how to do so. It would therefore seem to be the duty of the doctor interested in health and the educationalist together to find a way. Whether we like it or no, the child must be born into and live in the home. To develop the child therefore out of all proportion to the expansion of the home is to endanger harmonious development and to limit its possible scope. As we have already seen, the home is the biological environment of the young, and therefore we cannot disregard it. We must develop the

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child and the home simultaneously if we look for maximum results.

Economics can never change the fundamental facts of biology. At any time, however, biology may demand complete reversal of economics in the cause of economy itself. The home is the parents' by right of biology, and we dare not deprive them of the wherewithal to keep and to enrich it. Economics that tend in the direction of such a sacrifice are indeed precariously poised.

In the Pioneer Health Centre the Afternoon Nursery had no economic significance. It was an integral part of a medical organization concerned with the development of health.

CHAPTER 8

THE SCHOOL CHILD

As organizers of the Pioneer Health Centre, a question we had to ask ourselves was whether by including the school child with the rest of the family in our general medical scheme, we should be unnecessarily duplicating an already existing State service.

Already the Council School child is subject to periodic medical examinations in the school. School clinics are provided for the cure of the minor ailments disclosed by this means. These school clinics deal with such things as attention to the teeth, the extraction of tonsils, running ears, ringworm, etc.

Now the school child is examined by the school doctor for *the presence of disease*, as the objective and activities of the school clinics auxiliary to the school inspection clearly show. Moreover, the doctors examining the children, like all doctors, are trained for the detection of disease. So true is this of all clinical training in general that the medical student hardly considers he is initiated into the profession of his choice, medicine, until, his anatomy and physiology once behind him, he ultimately sets foot in the hospital wards. Here at last he encounters disease, and thenceforth the more successful

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he is, the more serious and more numerous the cases of disease that must preoccupy him.

The periodic medical overhaul of the school child could well be undertaken from quite a different point of view. It is possible to be concerned with health. How, it will be asked, does this differ from the goal of all preventive medicine, namely, with the ensuring of the absence of disease? Is not a person in whom no disease is discoverable 'healthy'? Fifty years ago the answer to the last question would have been: 'Yes, healthy.' The port medical officer allows immigrants to land in the country of their destination on these terms.

We now know that there are conditions which are not health but in which no disease can yet be specified. Much devitality is of this order; debility; weakness, general lack of development of body and mind, stupidity, dullness, 'nervous constitution', conditions too many to enumerate yet not classified as any specific diseases.

To be concerned with health is to be concerned with those factors of which this type of devitality affords flagrant examples of inhibited function. Health is concerned with physiological balance or equilibrium, with the body's powers of reaction and with the development of latent powers. We do not yet know what this entails. We have indeed even to learn how to approach the subject. We have to explore the capacities of the individual to react, and to find out how to elicit the body's response on demand. We have at present no standards of the existing average, still less of the expression of potential in the young. Somewhere a beginning must

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be made to this study and to the practice of this newer art in medicine, namely, that of the development of health. This new branch of Medicine might well be called the *Practice of Personal Hygiene*.

Clearly we had to examine the school children of our member-families, and could well do so without fear of any serious overlapping. This was a field making so new a demand upon us that we used our opportunities with the child to feel our way to the planning of a fuller campaign at a later date.

Two main classes of disorder were observed through our tentative work on the school child. Of these the first included nutritional disorders from which the school child suffers in common with the family.

A mother may come for her own medical overhaul and may return later with other young children under three. The doctor, seeing all, will perhaps be aware that none are as healthy as they should be, and yet no particular defect will arise into prominence. In due course there will come a schoolgirl of the same family who may have a succession of sores, styes on the eyes, etc. There is here, a vitamin deficiency, and the suspicion is only fully confirmed in the doctor's mind as he registers the same deficiency, but to a lesser degree, traceable in all members of the family.

Apart from the fact that the regular periodic medical overhaul undertaken by an organization like the Pioneer Health Centre, which is concerned with the family, effects a further object than the school doctor's examination of school children, we find it has an added value for diagnosis in medicine. The fact that the same doctor

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may see every member of a family, rather than a different doctor seeing each individual in that family, gives an added opportunity of visualizing a disease or maladjustment in all its phases.¹¹ The added advantage of seeing the same family repeatedly further adds to the value of each examination. This is an advantage which the school doctor does not enjoy, but which is of inestimable value to a doctor attempting to promote health in any individual.

The 'treatment' and the prevention of conditions such as the above vitamin deficiency, etc., entail a fairly intimate knowledge of the circumstances and habits of the family and the resources of the district, both of which are extremely difficult to gain without opportunity of frequent association with that family, and residence in the particular district in which they live.¹²

The fact that the staff of the Pioneer Health Centre was resident in the district gave the doctor a position of advantage over the school doctor who is a visiting official frequently dealing with none but the school children.

The second class of disorder prevalent among the school children of our experience included structural and functional disabilities such as flat chests, flat feet, clumsy gait, slow address, etc. These called for handling in a way that we were not in a position to undertake satisfactorily in a small preliminary experiment. If a boy is flat-chested, then some such provision is required as follows: R Swimming: 20 minutes 3 times weekly. Draft into team X: 3 months. This prescription suggests the careful placing of the individual in a

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team graded to meet his individual requirements and some co-operation between the swimming instructor and the doctor. The school doctor cannot write such a prescription even if he were so minded, for the public swimming bath usually becomes a private dance floor during the winter months, and there is no provision or time for the school medical officer to supervise such therapeutic activities. Moreover, the cost of such prescribing would be more than an already overburdened populace should be asked to pay. It would lead to disaster. The taxpayer would only once again be deprived of means he could otherwise devote to the furthering of the development of his own offspring, and the working-man would be deprived of still one further responsibility. Some responsibility is an essential to the life of the working-man, and his assumption of responsibility equally an essential of the healthy environment of his family. On this question we shall have more to say later.

Recurring overhaul of the same children naturally gives the doctor the opportunity of forming an opinion as to the intelligence and capabilities of the individual. Moreover, the family and its resources are well known to him. If in the face of circumstances the doctor thinks the child capable of benefiting from some further educational course (such, for example, as a secondary education), the lack of initiative of the parents and their inability, as a rule, to take advantage of existing facilities have to be overcome. Much has to be done before the parents can be persuaded that it is possible so to marshal their resources that they may meet the small

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though necessary expenditure this entails. Perhaps the fees are forthcoming for a secondary school, but the initial outlay cannot be met. This matter in the Pioneer Health Centre was handed over to the Social Secretary, and without charity a way was usually found of overcoming the difficulty—even if it meant the selling of a prized piano, bought (but not yet paid for) on the instalment system, to supplement the education (!) of this very child now destined for a secondary school. This is a means to the development of a fuller health.

In the case of the school child the question of school education naturally becomes prominent. We cannot forbear to mention the impression we have gained from observation of the results of the Council School education on the children of the families we studied in our first preliminary experiment. How often had one heard the opinion expressed that education in the Council Schools was futile, and that the ignorance and uncouthness of the children turned out by Council Schools afforded justification in itself for this opinion. This general impression is abroad in spite of the fact that there are many conspicuous examples of fine men and women devoting their lives to teaching in that service. A review of our several families and comparison of the satisfactory children with the unsatisfactory led us to the conclusion that the difference in the two groups was to be correlated with the degrees of responsibility carried by the parents themselves for their children. Where the parents are solicitous for their children's welfare and prepared to make sacrifices (not necessarily where they are well-to-do), the children are apparently in a position to take

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maximum advantage of the education they receive; where the reverse is the case, they profit nothing from the money and trouble expended upon them. Clearly, if this observation has a general application the necessity of some agency which can reach the parents in the home and modify the environment is one likely to prove of far-reaching importance in education.

Six-monthly examinations of the school child and observation of him during his leisure hours (from 4-6 daily) gave the doctor some idea as to his capacities and interests, and an attempt on the part of the doctor to assess this intelligence usually led to a conversation as to what he wanted to do and a careful consideration of what he was capable of doing on leaving school. This began *before the time for leaving school arrived*, and was coincident with a fairly full knowledge of the family tendencies, capacity and resources. These two factors put us in a position of advantage in the suitable placing of our children in industry or elsewhere on leaving school. A special committee, set up for the giving of advice on vocational selection, must always be hampered by the majority of its members having but little previous knowledge of the child, and less knowledge of the home in which he was reared. Our influence with the parents through their membership was usually sufficient to prevent them acceding to a 'blind alley' occupation for the child, and to fortify them in a determination to forgo for a still further period of the child's apprenticeship the small extra weekly sum he or she might bring in. This is prevention of waste of human energies. It is in a very true sense of the word preventive medicine. But it is also

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more than this. It is development in the individual of fuller health. Thus it is an essential feature of the practice of personal hygiene. It is with this type of work above all that the Social Secretary at the Pioneer Health Centre is fully occupied, and where she carries out what might well be described as constructive welfare work.

It is clear from the above that an organization like the Pioneer Health Centre has a place of its own which cannot be taken by any of the existing agencies already working for the good of the school child. The Pioneer Health Centre works for the child through the medium of the parent and the home. It is thus an agency which enhances the operation of all existing agencies operating for the good of the child. In particular it has power through its effect on the parents and the home to enhance the value of the education which the State at great cost is offering to the child.

In dealing with the school child, the nature of the problem raised by the attempt to develop health was explored. Tentative steps towards health were taken along the only avenues open to us in the circumstances under which the preliminary inquiry was made. The technique of the practice of personal hygiene had still to be evolved. In a subsequent chapter we shall see how this developed out of the needs of the individual.

CHAPTER 9

THE ADOLESCENT

CONCERNED with the child and its environment, we made our approach to health in the first instance through the young father and mother, parents of the child. We used the enthusiasm of their early days of marriage as an emotive force to effect a change in the home. Knowing that the individual and the environment were inseparable, we could not seek health for the child in any other way. To attempt to influence the home through the parents was in itself a big task fully occupying our energies. The adolescent, though essentially of the family, seemed sufficiently remote from our immediate purpose and sufficiently occupied with his own concerns to remain outside the scope of our preliminary inquiry.

This was not to be. The adolescent also is of the family. Experience proved that he also must be included in family welfare. What happened was that after we had been open about fifteen months, the young boys and girls of 17 to 19, attracted by signs of life at the Centre, asked to be allowed to become members. But the Pioneer Health Centre was for families only: solitary individuals were not eligible for membership. The

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adolescent was therefore refused membership. But the young applicant retired only to return at a later date with his mother! Here was a family seeking membership. Coming as they now did as a family, it was no longer possible to refuse them. Moreover, was it wise to do so? The young adult would in a year or two probably himself become a young parent. At least we could and must encourage him to take advantage of the periodic medical overhaul, even if we could not modify his environment.

The results of the periodic medical overhaul were interesting. In contradistinction to the adults, it was only very rarely that we found manifest disease present in these young people. Nevertheless, with disconcerting frequency both boy and girl were found to be of the C class of development, i.e., devitalized. All employers of labour, from the great industrialist to the housewife, will readily confirm our medical findings from their own experience. What percentage of people at the time of entering employment are found to be finely developed in body and mind? How often has the employer looked and looked in vain even among the middle classes for the man or woman with the personality fitted for the post of responsibility? Yet physical fitness, mental alertness and personality and, since health is beauty, we would add beauty, are the birthright of every man and woman. This discrepancy must be faced.

The conditions which we encountered when examining the young adolescent were much the same as those met with in the school child, nutritional deficiencies,

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statural defects, functional maladjustments. Some were removable, others remediable by calling out the individual's powers of compensation scarcely yet drawn upon. All these had slipped through the necessarily all too large mesh of the net of the school doctor, so that the individual was entering upon adult life and labour handicapped at the outset.

There were others, fewer in number, who showed no evidence of physical defect or maladjustment but whose mentality, manners and uncouth bearing bore witness to the poverty of the environment in which they had grown up. The high spirits of these youths were frequently being diverted into undesirable channels for want of opportunity and example.

These young people who came to their first medical overhaul were unconscious of their defects. It would almost have amounted to cruelty to have told them of their shortcomings unless, coupled with the statement, it had been possible to offer them some means of improvement. Yet this was impossible in the existing state of affairs. In the small space at our disposal we could achieve neither the means of adjustment nor the necessary widening of the environment. Nevertheless, this was demanded as the logical outcome of the periodic medical overhaul. This placed us in somewhat of a dilemma. In the small accommodation at our disposal, one small double-room and a garden, we were faced with the problem of catering for the social activities of people of all ages and many tastes. Too close proximity of a company of young folk with sedate mothers and fathers of families is difficult to manage. Being hard

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pressed for space, we were obliged to build a small hall which sufficed for children in the afternoon and for dancing, whist drives, etc., in the evening. But even then the young people did not always want to dance with the elderly, which politeness demanded while there was but one small dance floor; not every one wanted music at the same time, and so on. Most important of all there was not sufficient space to organize the sports, games and exercise essential to meet the high spirits of the adolescent.

To the periodic medical overhaul came yet another class of youth, few indeed in number, but conspicuous among their fellows. These were well-knit, both physically and mentally, kindling with enthusiasm, capable of still further development.

Here was youth on the threshold of manhood, eager for adventure, eager to embrace ideas, eager to work out ideals in life ahead. What was the meaning of life for him? What the significance of work for him? What was the meaning of woman for him? These questions were occupying his mind at the time when he was making contact for the first time with a new range of experience. Here was will to adventure, courage to attempt.

But what could be attempted? This was where the environment had pinched and was pinching still harder as manhood, and equally womanhood, was approaching. They had no opportunity of knowledge through experience or example of what could be done. Their position was different from that of the youth who, already blasé at 20, has done everything and consecutively

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missed the significance of life everywhere: the youth for whom everything is a bore, or merely ridiculous. In our adolescents we were conscious of enthusiasm dammed back for want of an outlet through which it could emerge in constructive effort. In them were lodged powers urging for expression yet lacking a field in which to be expressed: physical skill, mental capacity and emotional urge alike lay idle, a vast source of power untapped.

Here was the material upon which to ply the new art of Medicine—the ‘practice’ of personal hygiene. Here was the opportunity of evoking fuller health both physical and mental. Here in the young man and in the young woman alike were the pliable ‘parts’ in which might be induced the integration of a complete unit of humanity, man+woman functioning reciprocally as one organism. Here were future parents, who later would bequeath their health to their children.

Here indeed was an opportunity. Here was enthusiasm to be caught and to be led into a constructive channel: here was dormant capacity to be expanded and developed in balanced reactivity of the individual. The power of every nerve and muscle must be educated to yield the maximum response on demand; the energies of the individual must be gathered up and correlated as one whole.

The material was at hand, the will to co-operate present. *Only the environment necessary to bring about the development was lacking.*

The existing social agencies seemed to offer no solution to our problems, for had these not already failed to

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attract and to develop latent power, in these adolescents?

Moreover, there is an inevitable tendency for all social activities at present open to the artisan populace to isolate the individuals of a family rather than to weld them closer in one society. Each seeks his amusements separately, and there is no place where the family can forgather in any common social activity. How does this affect the adolescent? There is no place for the young people of both sexes to mix naturally. How in these circumstances can a satisfactory integration of the sexes occur? The time of 'walking out' arrives. Where is the youth to take his girl? The cinema is the only place where they can sit together, talk and find amusement. So it happens that, *for want of better*, it is in the atmosphere of melodramatic blood and thunder and rapine, or the levity of illicit love intrigues, that the ideals of courtship are at present being sown!

The adolescent had come to our doors asking for something better. If we rejected him, the streets, the cinema, the dance hall, idleness, boredom would ultimately swallow the enthusiasm of youth, and damp down the potential capabilities for development. Evidence of this sequence of events was already forthcoming in the history of some of the younger parents among our member-families. Something better than this, better in spirit, better in result, had to be made possible. This was a humane necessity. In our opinion it was no less a national necessity.

The adolescent to whom in the first Pioneer Health Centre we gave but scanty attention thus turned out to be the crux of our organization. The adolescent it was

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who made manifest the limitations of the preliminary inquiry and who determined the necessary direction of future development of the full experiment. The necessity for integration of society cannot be disregarded with impunity. The young boy and girl must be brought together naturally, the young must share some common interest with the old and vice versa, for whether we like it or no, each forms part of the environment for the other. The Pioneer Health Centre as it stood was too small. The adolescent had to be included. Nothing less than the family as a unit would serve for the basis of an organization devised to develop health.

How were we to proceed?

At this point we closed down the preliminary experiment and set ourselves to consider from the experience already gained how best to meet the necessities of the situation. The next chapter deals with our solution of this problem.

CHAPTER 10

SUMMARY OF CONCLUSIONS

FROM the preliminary inquiry we had learnt the following facts.

- 1 That the individual and his environment are inseparable.
- 2 That welfare of the child demands integration of the family. As a corollary, any attempt to develop the health of the child demands an organization capable of promoting family welfare.
- 3 That parents, i.e. the adult members of the artisan populace, are fully prepared to submit to periodic medical overhaul, and eagerly avail themselves of any advice gained through this means.
- 4 That continuity of endeavour can be secured through the interest of the people in their own medical-social club. No ulterior motive is necessary for its maintenance.
- 5 That the periodic medical overhaul of individuals over twenty-five years of age brings to light the fact that a very large proportion of individuals (over 90 per cent) are suffering from frank disease.

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- 6 That in the normal course of events this disease at present remains untreated. It gradually and imperceptibly (over a period of years) lowers the vitality of the individual who, besides finally being incapacitated, becomes irrevocably injured by the results of the protracted illness.
- 7 That such disease is usually amenable to adjustment when discovered at the periodic medical overhaul.
- 8 That through an organization such as the Pioneer Health Centre the onus of the detection of ill-health is removed from the patient, who is ignorant of the nature and also often of the presence of the disease, and placed in the hands of the doctor who is trained to carry that particular responsibility.
- 9 That any organization which makes possible an annual medical overhaul of average people affords the medical profession free access to disease in its earliest stages. Only in this way can the maximum value be derived from medical skill. This applies not only to early cancer but to many conditions less prominent in the public mind.
- 10 That up to 25 years of age, although disease is not present to the same degree, the individuals are largely the victims of devitalization both physical and mental.
- 11 That the individuals suffering from all these disabilities are anxious to remove them, but the means to do so are not available for the artisan.

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- 12 That in youth there is present a latent source of power, lying idle for want of opportunity to emerge. This power can be used in the cause of health. If it is not so used it is liable to become the source of disease, both in the individual and in society.
- 13 That whereas the old-established practice of curative medicine demands therapeutic measures, the *practice of personal hygiene* demands the power to prescribe exercise for the development of latent potential.
- 14 That such prescriptions have a greater market value than drugs for, besides being medical requirements, they are also of the nature of pleasures not otherwise obtainable by the artisan.
- 15 That the artisan populace has spare money which is at present expended on such amusements as exist in the district. With these it is frankly dissatisfied.
- 16 That given the opportunity, the artisan is prepared to spend his spare money in taking responsibility for the maintenance of his own health and that of his family. He is eager for responsibility but does not find a satisfactory field in which to exercise it.

Apart from the foregoing facts, we also discovered through the preliminary inquiry certain valuable information concerning organization.

The first point of importance was the discovery that the scope of the first Pioneer Health Centre was too

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small to embrace the entire family. The adolescent, future parent of our children, could not be provided for. The Centre did not afford a wide enough and sufficiently varied field of exercise for the functions latent in the growing child and adolescent, yet the adolescent too was an integral part of the family, and helped to make its environment. This restriction rendered nugatory much of the medical work we attempted on the older children of the family. Adolescence, a period of extreme importance to the educationalist, as it must also be in the development of health, could not be exploited by us in the cause of health for the simple reason that we had no equipment for this work.

The provision of suitable means for the promotion and development of health was an essential for the practice of personal hygiene. This was the first problem of organization to be overcome. The method we have devised to meet this requirement will form much of the substance of the next chapters.

The second point of importance in organization which we were able to determine through information gained during the preliminary inquiry was that *health cannot be enjoined by the assistance of charity*.

This statement is of utmost importance in view of the trend of public effort in the combat of disease. The hospitals, first founded as charities for the sick, have spread their influence throughout the land, stamping medical institutions and endeavour with their impress. Although the patients' contributory scheme has changed their financial aspect, the emotional attitude of the people towards hospitals and clinics remains unchanged.

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This is perhaps of little concern in dealing with the avowedly diseased individual.

National insurance against sickness and accident also comes to mind in this connexion. The employer and the State have shared, perhaps rightly as they share in the profits of labour, the responsibility for the working-man's sickness. This also is directed to disease rather than to health, rendering the question of responsibility of less moment in this connexion also.

What of the practice of preventive medicine, infant welfare, etc.? True, this has not hitherto sought to develop health but rather to prevent disease. But, we must ask, can any endeavour to prevent disease run the risk of fostering irresponsibility in the individual? This is not a matter for us to decide. The State and charity have already assumed responsibility for infant welfare work and for ante-natal clinics. Some boroughs proffer free protection against infectious disease such as diphtheria. Free milk and free drugs are a commonplace. Swiftly there is coming the demand for free advice on birth control!

The necessity of keeping vigilant watch over the working-man's last prerogative, the responsibility for maintaining his own health, must never be forgotten. It is possible, whilst giving palliatives with one hand, simultaneously to rob a man of his health with the other. This is a real danger.

Health cannot be enjoined through any system of charity. We have seen that responsibility and health are synonymous. Responsibility implies the freedom of action of an individual in poise about his own centre. Depen-

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dence implies a shifting of the centre to an extraneous position with loss of poise and a consequent rigidity or limitation of action. Expressed in physiological terms, freedom of response to external stimuli is inhibited. This is irresponsibility. It is also ill-health, a negation of potential.

Health demands that a man shoulder his own burden. It is better that he receive his whole wage and himself take the responsibility for his own welfare than that he be given what is presumed to be good for him and robbed of responsibility. The one spells health, the other atrophy and degeneration. Driven to this conclusion by theoretical considerations of physiology, we later found it borne out by experience in our preliminary inquiry.

We are now only on the threshold of the practice of personal hygiene. Its formal application is as yet undetermined. The first principle upon which it must be grounded is that HEALTH DEMANDS RESPONSIBILITY. The working-man must support his own health organization.

Experience gained through the Pioneer Health Centre has already shown us that we have no excuse for ignoring this principle. The working-man is eager for the enterprise. He is willing to pay for it. On what is this statement based? In the preliminary inquiry each member-family joining the Pioneer Health Centre paid the small sum of 6*d.* per week as a membership subscription. Experience taught us that we had made this subscription too low, even though the benefits we were able to extend were not all that the practice of Personal

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Hygiene demanded. Many a mother and father volunteered the information that the subscription should have been double that amount.

There is unallotted money in the artisan family. This surplus money individuals of the family spend week by week. If the means of developing health were to be had, this spare money would be forthcoming for its purchase. In the absence of these facilities the spare money is going to the cinema, the public dance hall, the billiard saloon, the betting tout and the public house. The pity of it is that within our experience the artisan does not even care for these things. *They are all that can be bought.* The spare money that now weekly goes to these things is available for the development of the health of the family.

Both the desire of the artisan to take responsible action for his own health and spare money for him to do so are present. Our responsibility as medical people and organizers is to find the organization that will make this possible. How has this responsibility been met?

CHAPTER 11

THE REPLY

THE FINDINGS of this report indicate that there is at hand material for a renewed attack upon Disease and Devitalization. It also indicates that there is a latent power of health in the individual which lies unexploited: an account at the bank of human life never yet drawn upon. On the authority of biology this account lies ready for use.

We had to go forward. A new Pioneer Health Centre is to be built.¹³ It is to be planned on the same lines as before, but it is to include all those elements that were lacking in the first tentative experiment. It will therefore be planned on a large enough scale to fulfil the two requirements that were conspicuously absent in the first. These requirements are (1) scope for exercise of latent potential in the individual and (2) the means of lifting the organization out of the category of charity.

We have shown that the biological unit of humanity is neither the individual nor the community. It is the family. Thus the substance of our organization, as before, will consist of a focal aggregation of families drawn at random from the surrounding neighbourhood.

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As before, each family will be attracted to participate in the organization by a desire for its own health. In the district in which it is planted our organization thus will be a focus of endeavour towards health, accurately described therefore as a *Health Centre*.

Periodic medical overhaul, and incidentally acquaintance with the medical staff of the Centre, as before, will constitute the first steps in membership. This condition, binding upon every individual of a member-family, will be regarded as an expression of the seriousness with which membership is to be undertaken and without which all endeavour is useless.

As before, our main efforts will be directed to the child. For biological reasons we have shown that the home, i.e. the parental circle, is the only environment in which we can look for the healthy development of the child. The roots of the child must be deep in the midst of the family. We have therefore to keep continuously before us the necessity for integration of the family. Membership of the Health Centre, determined upon jointly by both parents, brings the circle of parental activity within our reach. Thus the Health Centre becomes literally part of each home. From this point we can begin our work of tending the soil in which the young seed is to grow up.

We have seen from the preliminary inquiry that health has not gone from the people, but that it is languishing for want of scope for development. The young, above all, are eager to grow. As practitioners of personal hygiene we had diagnosed the presence of

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latent potential, but we lacked the instruments to educe it. The means of development was not at hand when and where it was wanted.

In the new Centre opportunities for development, which are the medical requirements for this newer practice of medicine, are to be at hand. The reader will not be surprised therefore to find gathered together under one roof in the new Pioneer Health Centre many things with which he is already familiar. We propose to make use of all those items of proved value in developing the individual which are already in use in social work. There will be a reading-room, a hall for debates, music, singing, cinema, a stage for dramatic entertainments, gymnasium, swimming-bath, dance floor, billiard tables, and so on. As well as this there will be a garden with as many opportunities for sport, exercise and games as space may permit.

First of importance among these will be the Reading Room. Here the first to come will be the young girl and boy attending the secondary school. Home is often small and overcrowded and the possibility of finding a quiet corner in which to read or work is small. This we can provide. The young people, once accustomed to the use of the Reading Room and reference books before they leave school, will look forward to the time when, as wage-earners and free agents, they can discard their school-books and come with the book of their choice in their leisure. By this time they will know the tutors who preside in the Reading Room, for daily there will be a man or woman of good education in charge of the books of reference and the quarterlies, etc. This in-

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dividual will by his or her own love and knowledge of books stir enthusiasm for reading, and at the same time afford just the help necessary to direct the less knowledgeable reader.

In the Reading Room, though there will be an ample supply of books of reference, there will be no library in the accepted sense of the word. This is no oversight. The provision in working-class districts of public libraries well stocked with books of varied order is so good that it would seem superfluous to duplicate that service. What is needed is the stimulus to read, to inquire into and to study subjects at the time when enthusiasm commands the attention of the young people. If, for example, a boy has just entered a printing works, wonderful new fields of thought may be opened to him by a tutor better versed than he, if not in technical works, at any rate in the many avenues of approach to the subject which the boy alone would never have encountered. The Reading Room is a field in which easy contact can be made between individuals of very different culture. Contact of this order is difficult to achieve in urban life where the classes live so completely segregated a life.

Out of the interests aroused in the study corridor we foresee arising spontaneously the legitimate demand for lectures, demonstrations, debates, poetry and dramatic readings, plays, music, etc. To meet these needs there will be a Lecture Hall adjoining the Reading Room.

From this nucleus all intellectual and artistic activities will have opportunity to grow naturally in the

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Centre. Exactly what their nature will be, time will determine.

Physical health has to be developed. On the physical side the provision of gymnasium, swimming bath, dance floors, and a garden in which practice for all forms of sports can be carried on, will also be made in the new Centre.

Those engaging in each activity will be formed into a series of intramural clubs, for example, the swimming club, the chess club, etc. Into these intramural clubs each individual, subject to his needs and inclinations, will be drafted by medical prescription at the time of, or subsequent to, his medical overhaul. Within each club graded and balanced teams will measure their skill and progress one with another. Thus, for example, in the gymnasium during the evenings and on holidays the members of the gymnasium club will meet in batches to carry on the exercises desired by each member and prescribed for each by the doctor at the medical overhaul. This exercise the young people will enjoy. Membership of an intramural club will be a pleasure, and each individual who is a wage-earner will willingly pay an additional weekly subscription for membership, apart from the family membership subscription to the Centre.

In the afternoon the gymnasium will be used by the school-children, again according to the prescription given by the doctor. In the case of the school-child, however, the use of the gymnasium will be a privilege derivable from the family membership subscription without further charge: the child, in fact, is still the respon-

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sibility of the parents, who will pay for his development through the means of their weekly subscription.

In conducting the swimming club the principle will be the same. Each member wishing to swim will be drafted into a group of swimmers suitably graded according to their skill and powers. With his group and for his membership subscription to the swimming club (perhaps 6*d.* per week) he will be privileged to swim three or four times a week according to programme. Thus the intramural club, though always a pleasure and greatly sought after, will be at the same time a source of disciplined development and not merely a means of whiling away time.

This aspect of endeavour will be continuously fed by contact with the more skilled among the members, by contest with outside clubs, and by the amateur who will come and exhibit his prowess and spread the infection of his enthusiasm in the club. This will in some measure be made possible by the provision in the Centre of a first-class bath in which special attention has been given to the planning of lighting, heating, ventilation and cleaning, as well as to the depth of the water.

Swimming is an activity well adapted to develop the physique of the child and to promote disciplined endeavour. Native children are often able to swim before they can walk, and there seems no reason, except lack of opportunity, why all children should not do the same. At the Pioneer Health Centre there will therefore be an Infants' Swimming Pool separated from the large bath. Parents will be able to enroll their children in the

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swimming club, with the concurrence of the doctor, at 18 months to 2 years of age.

In the new Pioneer Health Centre there will be no dragooning of the members, or any compulsion brought to bear upon the individual to make use of the opportunities that avail for him. The organization will not depend upon subtle inducements, material or moral, to take part in the life the organizers desire to see established, for if we set out to work upon biological principles we must look for free growth in every possible direction.

By free growth and development we mean the absence of any predetermined path along which the child's development is to be coaxed. The predetermined path is perforce a path visualized by the man looking out upon life through the small window of his (personal) consciousness. The path he sees is his path justly applicable to his own life perhaps, but not necessarily the path for his neighbours whose approach must be essentially different. Still less can it be the path for the child of the next generation occurring at a different interval upon the wave of life.

Moreover, biology has its statute of limitations which states that forced expansion in any one direction, i.e. along the predetermined path, can only be made at the expense of development in all other directions. Lop-sided growth is the result of such a process—something not endowed with harmony or balance but living upon compensation. The individual grown in such circumstances is like the workman who receives 10s. a week for the loss of his leg—or to put it more accurately for *not using* his leg. Reliance on habit is to take to a crutch

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to replace a lost part and the sensibility proper to it. We cannot determine how the child shall develop. We cannot therefore lay down lines and enforce progress along them. Practically this means that we must bring every possible opportunity in the way of the child and trust to the all-sentient life welling within him to provide self-discipline producing an internal order independent of external props or precepts from the past.

Will the individual therefore come under no discipline? Our answer is that achievement will be expected of the growing child. Biologically there is no achievement without ordering of the bioplasm. Order implies discipline. It is the highly organized (differentiated) species that has achieved supremacy. Man, by timely response to every deadly element in his environment, manifests in his person order beyond anything his own intellect can yet comprehend. This ordering has emanated from an intrinsic power of selection and rejection in response to stimuli from his environment—from a discipline intrinsic in origin and spontaneous in operation. From such considerations as this we must infer that order is the implicit sequel of free biological growth, and indeed it follows from our own definition of *Re-spons-ibility*—a *balance* maintained through the answering back to every stir in the environment. For us therefore there is no contradiction between spontaneity and order. On the contrary we anticipate order as a result of free growth, but we look for harmony in diversity—and not monotony in uniformity, as the basis of discipline.

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For the organizers this means that in any individual the expression of a desire to act is to be accepted as the intention to achieve skill in that direction. But achievement is only to be had as the result of self-discipline, willingly and consciously accepted as the condition of attainment—a principle well known and practised by the athlete. Thus if a boy wants to swim he cannot swim only when the whim takes him. He must join the swimming club, and take his place in a group of swimmers graded to match his own skill.

So far so good. In suitable environmental circumstances, the development of order or self-imposed discipline may be expected once the urge to achievement has been felt. How then, even when a rich environment has been provided, are we to be sure that the desire to achieve will be aroused in our members? Again we turn to biology. We propose to make the Centre a 'focus of infection' for each specific activity carried on there, for as we have already seen there is nothing so infectious as the sight of some one absorbed in some activity. Susceptibility to infection, and not immunity from infection, is the natural biological state accompanying supremacy. So-called natural immunity in the individual is not a condition of antagonism to the factors of the environment, but rather a *protagonism* with them. It does not consist of killing and rejection of the menace, but rather of acceptance and digestion of it: the transformation of the menace into a benefit. Thus health does not resist infection as it is popularly supposed, but heightens its reaction to it to a higher and higher degree so that the body learns to turn

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even the most potent agent for harm into food for growth.

To begin with, we propose to people the Centre with a nucleus of Doers, amateurs and others, all led by their own enthusiasm to carry on their activities in the centre. With such foci of infection in our midst, we expect action to become endemic in the Centre if not in the neighbourhood.

Now to ensure the regularized operation of the susceptibility to infection, the new Centre has been planned in such a way that all the activities are carried on in full view of all the members. The swimming bath is placed in the centre of the building and is flanked by corridors from which the swimming can be watched by every one not otherwise occupied. The same is true of the dance floors. They are laid down in the centre of the main lounge hall. By this means every individual of a member-family is constantly brought into easy contact with every sort of activity: he is subject to a daily temptation to venture upon some as yet untried enterprise. We foresee the possibility in such circumstances of fostering in the child the habit of taking advantage of opportunity, of launching out whenever possible. We know from experience the child who grows up with the habit of refusing all new experience. Why should the reverse not be possible? Habits acquired tend to persist. Moreover once acquired they are not directed to the objective side of the opportunity. They relate to the invitation to act, not to the object obtainable. Physiological satisfaction apparently lies in the doing rather than in the thing done.¹⁴

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Now to acquire the habit of attempting all possibilities means that all possibilities must be paraded before the child. To provide these circumstances is the task of the educator who seeks to stir in the child a subjective rather than an objective interest. We wish to see the child grow up with courage to launch his or her bark upon the flood, rather than with circumspection to seek out the man-made stagnation of the canals of life for safety. 'He who would have his life must lose it,' is as valid in biology as in ethics. The sailing of his or her bark and not the attainment of a goal is the biological urge of each individual.

It may be said that all the measures we propose to use are time-worn educational devices which on the showing of this very report have not provided the necessary response in the individuals for whom they have already been available. Our answer to this is that they have only occurred sporadically and in relation to the 'community' as the social unit. They have been set down without reference to the intimate lives of the people invited to use them, i.e. without relation to the functional unit—the family. There has been a girls' club here, a company of boy scouts there, a mothers' meeting in the Church school, an evening institute somewhere else, all unconnected with each other and without reference to the family life of the individual they cater for. Social workers have prepared carefully worked plots of good and rich soil, but they have had to rely upon chance winds to blow the seeds to settle in their seed-beds ; or perhaps some already lusty young plants having pushed through the crust of the home soil have

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transplanted themselves relatively late in life into the prepared soil.

We wish to see health not sporadic in the community but endemic. In the new Pioneer Health Centre all these opportunities—the rich soil—are being brought to the homes where seeds fall naturally. These opportunities will be woven into the life of the parents so that they become the familiar environment of the growing child from infancy—something more natural for him to use than for him to stand aloof from.

What then, we must ask, apart from the recurrent medical overhaul, will bring the parents constantly to the Centre?

The problem before us was that of finding ample scope for engaging the interests of every member of the family, without running the risk of unduly encroaching upon the freedom of each individual. We had to provide equipment that would enable interests to be shared in common in the leisure hour. We had to provide opportunity for varied activities, and above all activities that would arrest attention of the young and coincidentally afford diversion for the old.

The main social feature of the new Pioneer Health Centre will be a large central hall with a self-service cafetaria in which all members of a family may congregate with their friends. Here all can sit and talk, read the paper over a cup of coffee or a glass of beer, and watch the dancing or other occupations of the younger folk. Accessory to the main hall are the corridors from which the swimming bath can be seen. Here the mother and father can sit together and watch their children in

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the water. The children, sufficiently separated from their parents to be untrammelled, afford an interest and amusement for the leisure of the parents. This applies not only to swimming but to all the activities of the younger folk. Thus, out of the medical necessity for developing the individual, there arises a family and social integration also. This arrangement provides scope for families functioning to the fullest capacity, to move freely in the Centre, infecting the less vigorous with their health. For the principle of infection to operate there must be opportunity for social life within the club. We visualize the Centre as a stage upon which are gathered families, some living to the full, some less vigorous. The organizers of the Centre are as operators in the gallery of the theatre, directing the spot-light first on one actor, then on the next, as each takes up responsible action upon the stage of life. We cannot make the individual act, but we can bring before him the example of healthy action, knowing full well its infectious nature.

It must be continuously borne in mind that none of the facilities hitherto mentioned are luxuries. They are essential medical requirements. They are essential for the practice of personal hygiene, for the development of intellect, precision, skill, prowess and physique. They are equally necessary as providing an appropriate field for the integration of the sexes.

In the first Pioneer Health Centre we drew families from as wide a social circle as existed within our district. In the new Pioneer Health Centre we expect to do the same. As well as close contact of the organizers and

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medical staff with the members, there will also be the amateurs interested in the activities which form the basis for each intramural club. Thus a natural inter-mixing of people of varying culture will take place through the Centre. Opportunities to mix freely and at ease in all strata of society are necessary for the health and full development of every individual, no matter what his education. It is no less necessary for the social health of the nation. There are all too few fields in which there is any possibility for such co-operation in modern life. Each section of the community lives closely segregated among its own class, and the barriers in no way lessen as money holds increasing sway. We cannot begin this work in a district where the community is a mixed one. We must begin with what is at hand and work gradually towards a fuller social co-operation. It must be borne in mind that there can be no greater incentive to social integration than health.

The foregoing is but a rough sketch showing how the new organization is to be equipped to permit of the practice of personal hygiene. We come now to the second new feature of the organization. The new Pioneer Health Centre is to be *self-supporting*.

How is the money necessary to form such a Centre to be forthcoming?

One of the objects in running our preliminary inquiry was to find out how much spare money weekly was available for our use. We succeeded in coming to a very fair approximation of the average family income and the spare funds which can be utilized for health purposes. We know that each family can afford and is

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willing to expend at least 1s. per week as a membership subscription.

This is one source of income.

A second source of income is the weekly subscription each member will pay for membership of the special intramural clubs he joins. Knowing the amount of spare moneys in the family, we think it reasonable to anticipate another 1s. per week per family from this source.

In planning the new Pioneer Health Centre it was largely financial considerations which determined the scale on which to work. It was necessary in extending the organization that it should not be allowed to grow so large that personal contact between member and staff and member and member would be impossible. Moreover, the organization clearly had to remain restricted to a limited geographical area so as to become part of the civil life of the district in which the member-families must operate. The maximum number of families we could undertake to make provision for was 2,000.

We have seen that there is 2s. per week per family available from each member-family. For 2,000 families this represents an annual income of £10,000. Moreover, each wage-earner of a member-family, other than the parents, will himself become an associated member paying his own membership subscription. This should bring in a minimum additional sum of not less than £250. The relative cost per head of running an institution such as we visualize diminishes considerably as the number catered for grows larger. We estimate that the

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centre could not be run on an economic basis for less than 1,500 families. Thus from financial considerations alone our building had to be planned to accommodate 1,500 to 2,000 families.

There are, however, quite other considerations to be borne in mind. We set out with the idea of making a scientific inquiry to guide us in the practice of personal hygiene. For scientific and statistical purposes a working number of less than a steady 1,000 units is useless. 1,500 families would probably yield a steady thousand: 2,000 would certainly yield a 1,000 permanent member-families, and leave ample margin for families who leave the district and others who replace them.

Both economic and scientific considerations thus led us more or less to the same conclusions as to how our plans should be laid. From our computed expenses we have found that we have a reasonable possibility of covering the running costs for the number of families suggested, and indeed that there will be a margin of some £1,000 per annum for the repayment of the cost of the building. In making this rough estimate we have not included income derivable from the cafetaria or from such things as the sale of beer, cigarettes, etc., items proverbially profitable in themselves. These afford a good margin to cover unavoidable error in necessarily rough estimates.

It is important to emphasize once more that medical reasons force us to devise a public health organization which shall be self-supporting and not what has come to be called 'charitable'. If we can achieve the running of a self-supporting health organization for the working-

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man, we shall already have set foot on the threshold of a new order of things.

The service we seek to establish is a new type of medical service—the Practice of Personal Hygiene. It appropriately demands new methods. These are to be the subject of our researches in the full experiment now in hand.

EPILOGUE

IT IS CLEAR from the foregoing considerations that, along with other sciences, medicine is in the throes of significant change. In the art as well as in the science of medicine the pendulum, now at the cumulative crisis of analytical disarticulation, shivers ready for the return to the opposite pole through reconstruction in the dynamic mode. No longer content with the older static view of the isolated patient, we are beginning to seek a dynamic picture of life as a whole with the individual as a centre of action. In the past, years of patient investigation have been spent in picking to pieces the human machine, cell by cell and even granule by granule. This was inevitable and a necessity. To-day that approach satiates and we turn in the opposite direction. Our concern is no longer with the items of structure but with function. We turn from disintegrative analysis to integration and correlation; we cease to focus attention on the discrete organ and its disorders, and find the field for our labours lies now in the individual intact in action and reaction within his environment.

This swing of the pendulum inevitably calls for a reconstruction in practical issues. All endeavour in medicine, whether directed to practice or to re-

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search, must be brought into line with the changing outlook.

In medicine it has perhaps been the very advances in skill and technique which have hurried on the changes heralded in the foregoing pages. Such changes, for example, as the necessity of taking account of the individual as a whole, and the impossibility of studying or treating him apart from his environment even though he present himself as an isolated being under the guise of 'patient'. There is a growing feeling of uneasiness in the profession at the ever-increasing tendency to split up medical practice into specialism with the necessary narrowing of the vision which must accompany specialization, and the lack of integration that must inevitably follow from such a procedure. In this connexion it is well to remember that the new outlook that is being forced upon us cannot fail, as it permeates through the whole of medical practice, to consolidate it at the same time. The essential need is to press forward in the knowledge that new light means power to act anew, differently.

Apart from advances in the technique of medicine, there are factors outside medicine which have been steadily contributing to the change of which we are now becoming conscious. The word *health* itself is undergoing metamorphosis. Formerly every individual not suffering from disease was accounted healthy; even a (rickety) dwarf could be 'healthy'. To-day we demand, in the name of health, more than a negative quality, the mere absence of disease. Nothing short of an individual exercising all his powers with a minimum loss of

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energy can now be classed as healthy; even thus we are apt to linger hesitant about the word health. Man is a creature of destiny; we suspect vaguely that as an organism he is not yet what he may well become. We are becoming increasingly aware of a source of unexpressed power in man. Both as an organism and as a species we are dimly aware that he conceals within him potentialities unexpressed and capacities still unused.

The poets of many ages have borne intuitive testimony to this. Now science begins to add its testimony by experiment. From physiology we must accept the fact that any given organ of the body, in average circumstances, works up to one-eighth only of its capacity, i.e. it has seven-eighths reserve. So long as this seven-eighths can be drawn upon instantly and at need, the organ may be regarded as healthy. Where, however, this capacity to react to effort is lost, the condition becomes pathological and a real source of power is lost. This does not mean that frank disease will result immediately or that the subject will at once be aware that he is not in health. The compensatory powers of the body, as we have seen already, are such that the deficiency may have been entirely masked from the untrained eye. Where one organ fails to respond to an increased demand, others take up the task, making up for the deficiency, and it may only be when the last working margin of capacity to respond, the last one-eighth, breaks down, that obvious disease ensues. Thus to be without disease is not necessarily to be in health.

That which is true of each organ of the body is still more true of the organism as a whole. The power that

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each individual manifests is not necessarily a measure of the sum of his potential power. Our present understanding of the function of sex affords an example of this.

We have seen already that, from the approach of biology, we must regard the species *homo* as not yet consciously co-ordinated as an organism. His parts, male and female, are present, but he has not yet learnt to use them in integrated function. Like the infant, he has two legs but has not yet learnt to use them together. Where now he can but crawl, time will come when he will walk resolutely.

But biology affords still further testimony to the latent power of *homo sapiens*; this time, within the species. Picture in the march of time a progressive development of species—progressive ‘differentiation’ of structure as we call it—running *pari passu* with an ever-widening range of functional capacity. Supreme at the head of this biological progression is *homo* with face set to the future. When compared with the computed age of the world in which the species lives, the span of its past existence is so short that it might be represented as but a day in ten years of time. Man appears to the biologist to be only now on the threshold of experience. Like the insect just born, he has been basking in the sun drying his wings for the first flight still to come. Where he is going no one may say; we can only infer that the power to grow is there lying ready to emerge. His structure is there: its function has still to become manifest. The new task of medicine is that of midwife in the delivery of this function—alive.

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Biology again comes to our aid with a suggestion fraught with significance: *Homo sapiens*. Is not the whole history of *Homo* a continuous rising into consciousness of latent potential and his use thereof? His very nature is such that from the moment of becoming conscious of a power he must use it. Moreover, his consciousness, as we have seen, entails 'responsible' and controlled action. Not only must he act but he must control his actions. Perhaps Man is already beginning to recognize the stir of destiny within him. Perhaps, trembling instant upon the threshold of further development, he is feeling his own power of evolving. If this be so then simultaneously he must bring this power to subserve his own full consciousness.

Herein, perhaps, lies the new incentive to dominion for which civilization has been groping hitherto incoherently. Up till the present time the last or 'western' civilization has been swayed by ambitions of external dominion. The new epoch that is approaching calls for internal supremacy—*homo* triumphant not over the external world alone but also over its own dual self.

Just as the urge in man as an individual has been to the attainment of order in his personal circumstances, so in *homo* the species, the urge is to order in world circumstances. What has biology to contribute to an understanding of this endeavour? In biology *Homo* is not a series of discrete units, but a rhythmical repetition of events in series, a continuity. The human organism, man + woman, is thus one with the child as the child is one with it. What the organism cannot itself achieve can be achieved through the child, flesh and brain and

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spirit of itself. Thus in reaching out to make the world the world of its choice, *Homo* is not reaching forward in vain. With the conscious assumption of *Responsibility* in the biological sense in which it is defined in this book, the human organism, through the child, is challenged with the selection and construction of its own Future. Through a process of internal dominion it is to achieve the reality of its primitive intuitive dreams.

Thus through the process of biological development the Word of God becomes the deed of Man.

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¹ (*page 7*) The family income within the area in which we worked ranged on an average from £2 10s. to £3 15s. per week. The average accommodation of each family was $2\frac{1}{2}$ rooms. The average number of people per family $4\frac{5}{8}$ persons.

An idea of the social status of our member-families can be gained from the occupations of some of the fathers of the families. These included—schoolmaster, owner of small old-established business supplying army, navy, tramways, etc. ; clerk, fireman, dairyman, milkman, mechanic, busman, railwayman, porter, ganger, casual worker. Families on the dole and receiving relief from the guardians also afforded the weekly subscription and maintained their membership.

² (*page 9*) On becoming aware of this necessity we were led to install a bath at the Centre. This was available for workers daily for a small fee. It proved most popular and was in constant and regular use.

³ (*page 12*) Examples of the type of condition found at the medical overhaul are—Varicose veins, haemorrhoids, flat feet, hammer-toe, incapacitating bunion, scoliosis, nasal obstruction, ear-discharge, glossitis, hernia, chronic appendicitis, gall-stones, gastric ulcer, goitre,

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chronic mastitis, cervicitis, syphilis, acute gonorrhœa in father, mother and girl of 4 years of age. None of these were receiving treatment.

⁴ (*page 14*) The state of affairs gradually growing up around the hospital Out-patients' Department is far more serious than indicated in the text. The hospital Out-patient Department, without modifications of its original structure, is tending to assume the role of general practitioner for the populace.

The Out-patient Departments of the hospitals were originally formed as clinics, in which those patients sent with a letter of introduction from their own private practitioner, were seen and sorted out by the physician or surgeon to whom they were sent with a view to admission. The same Out-patient Department clinic also met the requirements of the same physician or surgeon with respect to the supervision of cases discharged from the wards, but still under his care.

Gradually the necessity for the presentation of a letter of introduction from the private practitioner was overlooked and patients began to drift into the hospital of their own accord. This was the first declension from the general practitioner. Later the system of assisting the hospitals by grants of money, dependent for their magnitude on the number of patients treated, encouraged the hospitals to accept all and sundry without ceremony. The increasing number of students and their needs were adduced as justification for this procedure.

Those students have grown up without knowledge of the tradition once governing the seemly conduct of medical practice. Some in their turn have become

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physicians and surgeons, accepting all and sundry out-patients, while others have become general practitioners. The best of these latter have become too wise to send their patients to a hospital through the ordinary routine: they send them direct to the consultant of their choice, often, owing to his courtesy, to his private consulting-room, where their names are entered in the hospital admission-book, or they are sent straight back to the practitioner with a note. In either case the present hospital student is deprived of the legitimate and selective experience proper to the Out-patient Department.

The panel system has not improved matters. The old family practitioner, once the servant of the people, has become for the working-man the panel doctor, legal servant of the State. Where the doctor is a good doctor nothing will alter his relationship to his patient; where this is not the case the old relationships are disturbed. The artisan and his wife prefer to try their luck at the hospital Out-patient Department, where they go and are accepted as patients without introduction. The doctor loses them, and the hospital Out-patient Department is further overloaded with material suitable for the general practitioner, but not for the Out-patient Department.

The private practitioner has still more to suffer. The hospitals, always beggars owing to the voluntary principle in vogue, have devised a Hospital Savings Association to which the working-man is asked to subscribe. This he does willingly, but when any uninsured member of his family falls sick, his wife, his child, apologizing

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to the practitioner he was wont to attend formerly, he flies immediately to the hospital, demanding attention which he now considers his right as a subscriber. The money given to the hospital is stolen in advance from the practitioner, for the man would, and clearly, since he had money to give away, could have paid duly for the illness of the members of his family.

On the other hand, where the practitioner is unscrupulous, he uses the Hospital Out-Patient Department as a means of ridding himself of the burden of the chronic type of insured patient for attention to whom he continues to receive payment under his panel contract.

So much for the practitioner. What of the hospital procedure? The Out-patient Department is once more flooded with a class of case that belongs to the private practitioner. The hospital is not staffed with men concerned with this sort of practice, and it consequently tends to be neglected to the detriment of every one. The students, taking their colour from their teachers, tend to despise the minor ill and thus also the man whose work it is to tend it—viz. the practitioner. In this way general practice tends to become despised by the able student, who turns naturally towards specialization.

Moreover the Out-patient Department is crowded out. So many patients present themselves that the consulting staff responsible for the daily duties in the Out-patient Department are overburdened and detail their work to juniors who come there for the specific purpose of learning from the chief. The chief skilled in the niceties of diagnosis and treatment has no time to

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consider the legitimate case fully or to teach the student thoroughly upon it. The teacher, the clinical assistant, the student and the general practitioner are all the losers.

This is the aspect of the doctor and the hospital. The aspect of the individual under consideration is dealt with in the text.

⁵ (*page 25*) A woman of 59 came for a medical overhaul. Latterly she had become thin, pale and depressed. She had also suffered from indigestion, but who has not? It seemed insufficient to trouble her busy practitioner about. During the course of the overhaul it became apparent that she had a secret fear of cancer, but this had seemed too silly to disclose earlier. A thorough examination was made. No physical lesion was found except a dry tongue deeply pitted and cracked on the upper surface—glossitis. The cause of the irritation leading to this was not obvious, but it was clearly a serious one. It could not be teeth, for she had had none for fifteen years. Her dentist had seen the dentures recently and had pronounced them still a perfect fit. On removal of the upper denture, however, the palate showed slight early signs of excoriation similar to that of the tongue. The plate was slightly discoloured on the upper surface but was otherwise, as far as could be seen, well kept, for the woman was scrupulously clean herself and ‘washed the dentures twice daily with carbolic soap’. As there was no other possible source of infection of both tongue and palate a swab was taken from the upper surface of the denture. This showed a heavy bacterial growth. The plate was broken across

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and its cut edge revealed, under a magnifying glass, a surface so deeply eroded that it had become like a sponge filled with bacteria.

The patient took the advice given her, which was to have a new denture made. Three months later her tongue had resumed its natural appearance. The patient regained flesh and the indigestion disappeared.

Here perhaps a cancer may have been prevented: who can say? We do know that chronic irritation is the most potent predisposing cause of cancer.

⁶ (*page 30*) Many conditions come to mind revealing how great an asset was the family club to the doctor called upon to deal with conditions disclosed at the medical overhaul. The following case affords a good example. A young woman complained that she was suffering from 'neurasthenia'. She had been married for four years. At the time of her marriage she came to live at the other side of London. This meant that she was cut off from her own home and from the many friends she had made before marriage, for formerly she had been a keen swimmer and belonged to a women's swimming club.

The woman's mental condition was bad. She was diffident, depressed, terrified of another miscarriage until she was assured that it was not necessary for this to happen if carefully guarded against during pregnancy. She had one good room and lived in it, alone. She was unoccupied all day, except for the brief period taken up by the shopping necessary for herself and her husband. There were five families living in the same house as she and her husband, but owing to social and moral dis-

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tinctions between herself and the other families she 'kept herself to herself'. This resulted in her being literally friendless, lest she should be overrun by her immediate neighbours. For this wife the Club was of inestimable value. She came frequently in the afternoons and began to make a *layette*, found friends, gained experience of children in the Nursery, and she and her husband entered into the social life of the Club in the evenings. Within three months she was hardly recognizable as the same woman who three months before had crept into the secretary's office to find out if she could attend an ante-natal clinic.

⁷ (*page 33*) The need for after-care is well illustrated by the case of a man who had lost a leg in early manhood. He wore a wooden stump in preference to his false leg, which he kept for Sundays. On examination he was found to have a curvature of the spine (scoliosis) due to the gradual shortening of the wooden stump owing to wear. The wooden leg was $1\frac{7}{8}$ inches shorter than the remaining leg! The process of shortening had been so gradual that the man had not noticed it. He had become very readily fatigued on walking and therefore had given up walking; but it did not occur to him to consult a doctor.

⁸ (*page 37*) Psychological maladjustment is well illustrated by the case of a man who, five years previously, had had an attack of influenza. During the attack he had been told by his doctor that his heart was affected and that he must take care not to exert himself. This advice he followed. He became afraid to go out alone, afraid to go on a journey, afraid

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almost to laugh. On joining the Centre he presented the appearance of a morose and sick man with one foot in the grave. His business had gone to pieces and he was casting the shadow of his supposedly imminent decease upon his adolescent family.

On examination there were found to be no signs of heart disease present. Doubtless the heart, dilated during the influenzal attack when he was attending his doctor, had returned to normal size subsequently. The physical lesion had gone; the mental lesion had persisted. On being informed of the absence of any heart lesion and recommended to live an ordinary life, the man gathered courage, helped by his wife, who took up the new cue with good sense and enthusiasm. They both entered into the life at the Centre, and within two months the man was once more leading an ordinary life. Not the least evidence of this was the fact that his business slowly began to flourish once again.

Besides being an example of a psychological maladjustment this case affords a further example of the need for after-care and the need for an environment in which healthy action is enjoined. It is possible that the psychological change illustrated above would not have been so complete had we had no opportunity of fuller contact with the members than the consulting-room alone afforded.

⁹ (*page 56*) It is probable that in the loss of many of the old recipes now fallen into disuse in the home, we have lost a valuable source of essential foods. For example, home-made ginger was made from yeast. Yeast has been shown to be rich in vitamin. What for-

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merly was supplied by intuitive selection, now must be supplied by substitution backed by knowledge of physiological requirements.

¹⁰ (*page 63*) Indeed the essence of cancer in the body is that a part of an organ becoming released from subservience to the general requirements of the body as a whole, grows locally to the detriment or even destruction of the whole body.

¹¹ (*page 113*) In one such case, although the mother at some earlier date had been advised in some detail about food requirements, it was found that the dripping she used was bought in a carton, and turned out later to have been used for frying fish ten days before being put in the carton for sale as dripping. The vegetables she used for the midday meal were prepared without soda, but were being set on the hob at 10 a.m. and consequently boiled for three hours! A further interesting item in this connexion is the 'peripatetic' vegetable: it starts life in the West End of London; when not sold it passes later to a shop in Peckham, and, if still unwanted, passes finally to a barrow in the street, whence it reaches the saucepan as a 'fresh green vegetable' at least ten days after being gathered.

¹² (*page 113*) A point in medical organization arises in this connexion. It is clear that a staff of specialists would not be the proper personnel to employ for this type of medical overhaul, even under ideal conditions where it might be possible so to arrange it. Doctors of experience in constant attendance and without bias must undertake the examination. Wherever necessary the individual may, with maximum advantage, be

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referred to the specialist for confirmatory diagnosis and special therapy.

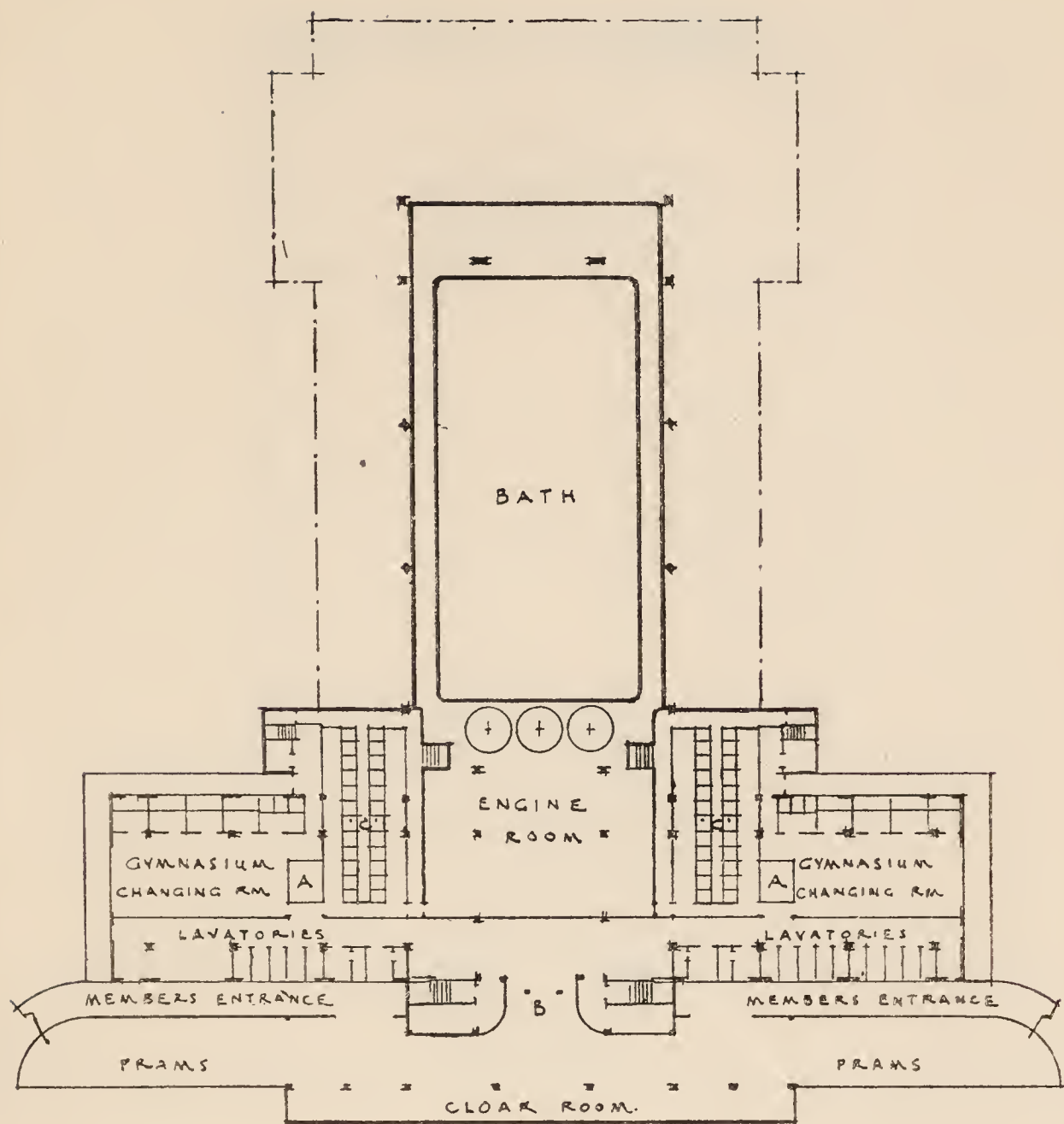
¹³ (*page 132*) THE NEW BUILDING. A very fine site of about two acres of land but a stone's throw from the old Pioneer Health Centre has been bought. Upon this site a building has been planned in full detail (see illustration) to meet the needs of a complete organization for the promotion of family welfare.

Two wings on the first floor of the building, one for men, one for women, are devoted to the medical consultation rooms and to the receptionists, who will deal with the filing of the confidential notes of the medical staff, their records and statistics.

Between the two medical wings are situated the main administrative offices. Here appointments will be made for the doctors and dentists and for the social secretaries. Here also the family records will be stored and the general office work carried on.

Beneath this section of the building stretches the large main hall of the Centre. This covers an area of 160 feet by 46 feet. In the centre of this hall is a self-service cafeteria from which members may buy refreshments to be eaten at one of the many tables arranged around the dance floors in each wing of the hall. This hall will afford a meeting-place for all members of the club in the evenings. It will have somewhat the aspect of a Continental café and will afford an opportunity for men and women to enjoy a common social life for which, as we have seen, the artisan has so little opportunity in existing urban conditions. It will afford moreover a meeting-place for the whole family in leisure hours.

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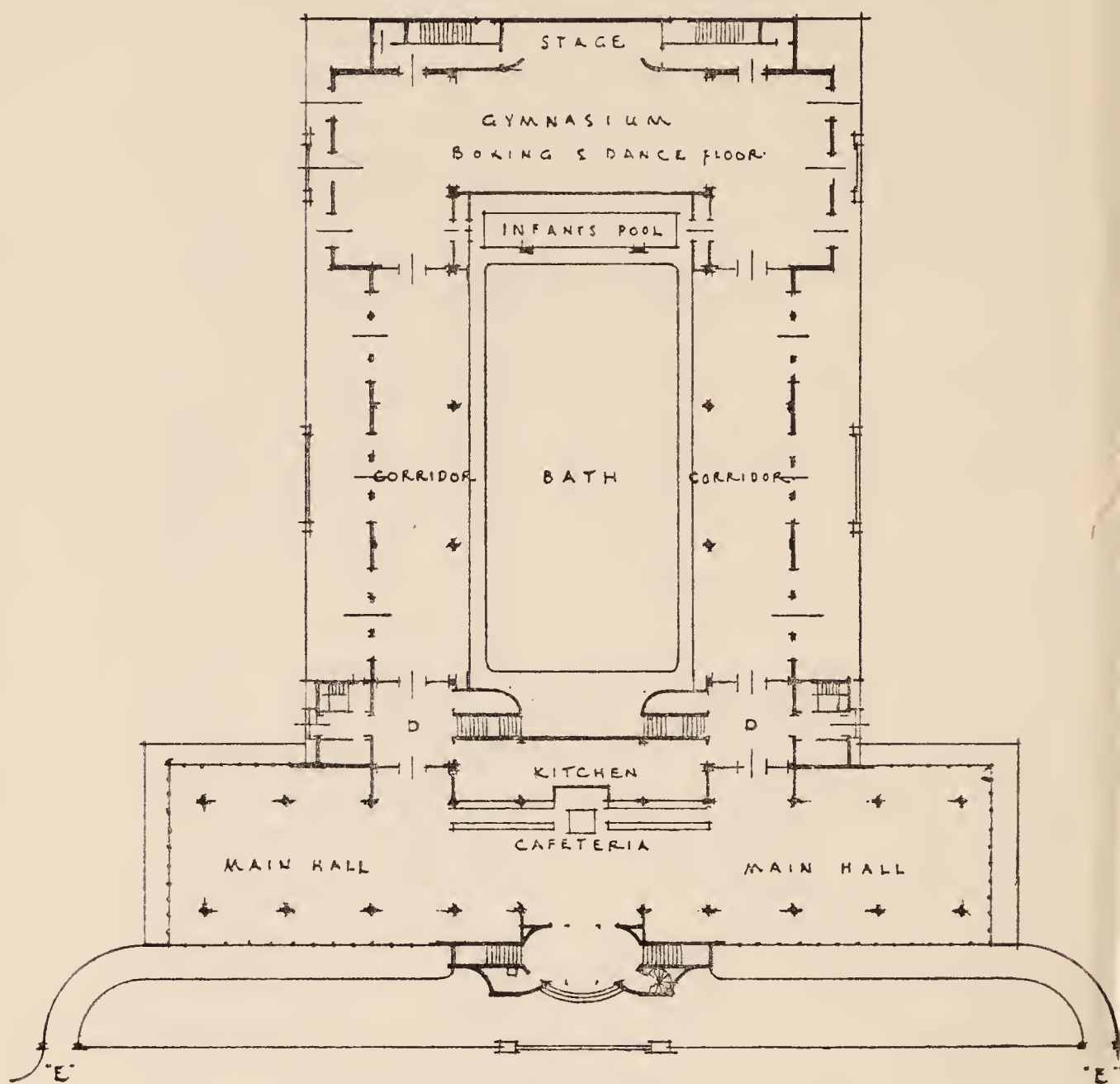
: BASEMENT

PLAN :

- 'A' CHANGING ROOM ATTENDANT
- 'B' TURNSTILES
- 'C' SPRAYS

E. B. MUSMAN A.R.I.B.A.
ARCHITECT
NOVEMBER: 1930.

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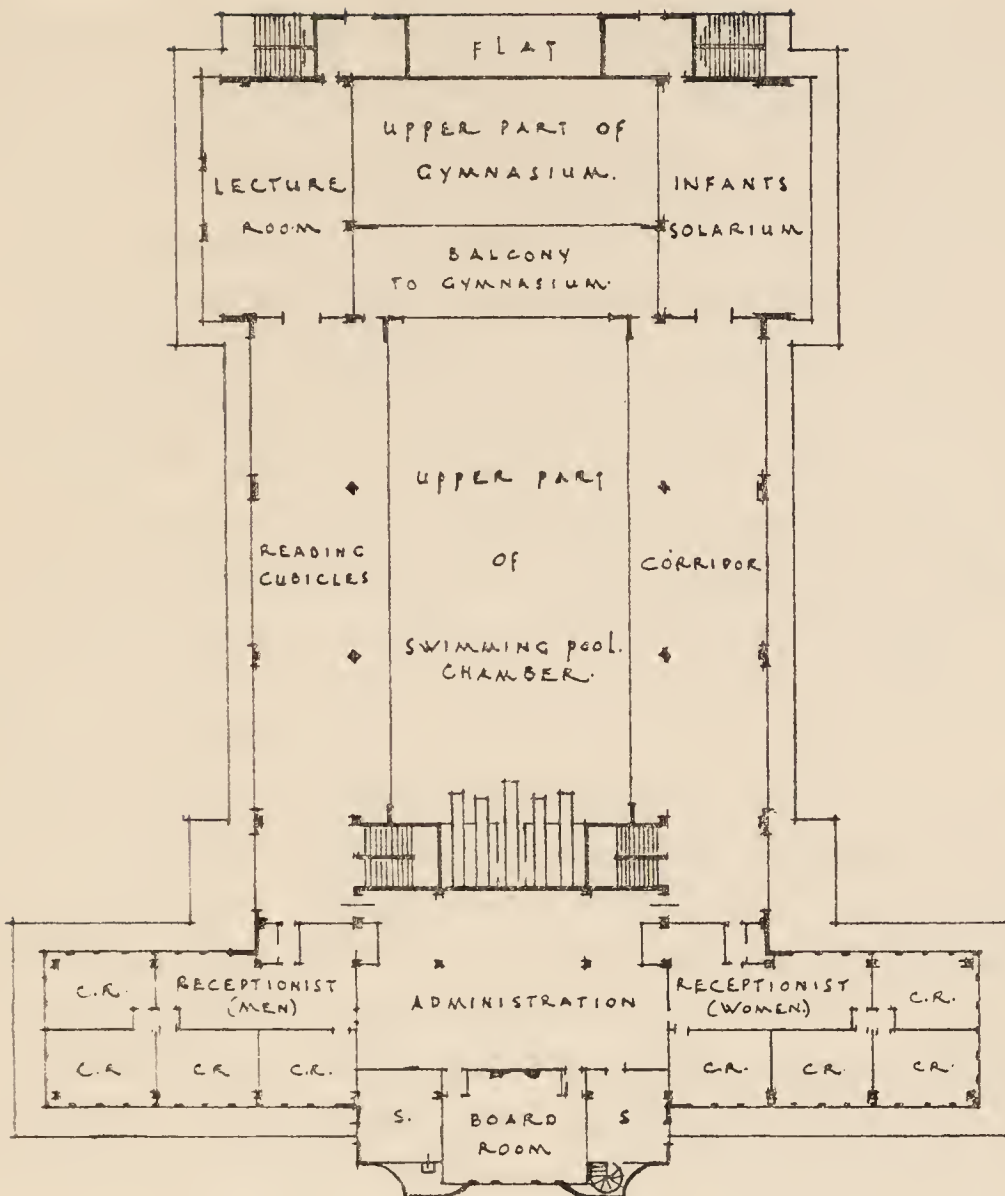


GROUND FLOOR PLAN :

'D' { STAIRS TO MEDICAL
FLOOR
'E' MEMBERS ENTRANCE

E. B. MUSMAN . A.R.C.B.A
ARCHITECT
NOVEMBER 1930

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: FIRST FLOOR PLAN :

C.R. CONSULTING ROOMS.
 'S' SOCIAL SECRETARY.

E. B. MUSMAN. A.R.I.B.A.
 ARCHITECT. NOV. 1930.

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Behind and at right angles to the central portion of the large hall is a Swimming Bath of regulation size and depth for competition use. The bath-chamber is totally enclosed, and an original device has been planned in an attempt to eliminate from the water level the humidity which makes exercise in the swimming-bath atmosphere usually so detrimental. At the deep end the bath-chamber is surmounted by a tower to permit of a high dive. At the shallow end of the bath there is a babies' swimming pool. The whole is flanked on both sides by a wide corridor from which the swimmers can be seen through a plate-glass window running the length of the bath. These corridors will provide parents and others with a place where they can sit and watch the young folk in the bath. The corridors were planned in this manner in order that the spectators may not suffer from the noise, dampness and heat of the usual swimming bath.

Since the bath-chamber is flanked by corridors from which the swimmers may be watched, it has been necessary to remove the dressing-boxes from the sides of the bath to some more suitable place. In the Pioneer Health Centre the bath changing-rooms occupy a large space in the semi-basement beneath the large hall.

The changing-rooms are so arranged that every bather must pass through a spray before reaching the bath chamber. There is no access for people in outdoor clothes and boots to the corridors of exit from the spray baths or to the main bath-chamber. In this way the carriage of all dirt into the chamber is obviated, the water consequently kept purer, and the cost of the filtration of water is hereby lessened. The spray-baths,

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48 in all, are arranged in sets of 12. Groups of 12 people may enter the bath-chamber simultaneously. The return from the bath to the changing-room is effected through a separate entrance so that the sets of sprays, each one served by 4 lockers, may be used in constant succession and are not put out of use till the first group of bathers have returned from the bath and are dressed. It will be appreciated that this method of planning is essential where a series of groups of individuals are passing into the bath for allotted and prescribed time. It does not prevent the bath from being used by single swimmers where occasion necessitates it, as indeed it may well do at the Pioneer Health Centre when, for instance, men on night duty wish to use the bath in the mornings.

The corridors flanking the bath on the water-level afford space for activities of their own. They form accessory dance-floors and space in which fencing, billiards, indoor bowls and similar occupations can be carried on in comparative quietude.

Above these corridors are two others situated behind the medical administrative quarters on the first floor. From these also the bath can be seen through plate-glass windows and they afford additional accommodation for spectators when swimming sports and competitions are in progress.

One of these corridors will be used in the evenings for the quieter games, such as bridge, whist, chess, etc. For these activities also, clubs will be formed in the same way as for athletics. Those taking up games of this order will be thereby encouraged to do so seriously.

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In the afternoons the same corridor will be used by the mothers as a tea-room and work-room. This corridor is conveniently placed between the women's medical wing in front and the infants' nursery, which extends over one half of the gymnasium at the back of the building. The club will open daily at two o'clock, and when the mother arrives in the afternoon she will leave the older children downstairs in the garden or the ground-floor corridors which serve for the Afternoon Nursery. The infant in arms will be brought up to the Infants' Nursery, where the mother may leave it to sleep in a cot. The Infants' Nursery is a large room leading off the upper corridor which serves as the mother's Tea-room. It faces south, and is constructed with sliding windows that can be thrown entirely open, weather permitting, and is within easy reach of the women's medical wing, where infant consultations are held.

The opposite corridor on the first floor will be given up to a series of study cubicles, each screened from the rest and provided with a table, chair and reading-lamp. These will be available for all the young people who wish to employ their leisure in study. Reference books of all kinds will be stored there for convenience of the readers.

The area over the north end of the gymnasium has been set aside to provide a small hall suitable for lectures, demonstrations, debates, music, poetry and dramatic rehearsals, etc.

At times dramatic entertainments will be given at the Centre. On these occasions the two gymnasium floors will become the auditorium, and a recess at the back of

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the gymnasium will form the stage and wings. The gallery joining the two upper side corridors will afford on these occasions an additional to the auditorium, in the form of a balcony.

On the second floor flanking the tower on the north, west and south, is a large space at present unallotted, but which will probably serve for the laboratory accommodation necessary for the scientific work of the Centre. (Plan not shown).

The large semi-basement below the front of the building contains, as well as the bath changing-rooms, gymnasium changing-rooms, cloak-rooms, etc. The bath machinery and heating, ventilation and electrical apparatus are also all housed in that quarter of the building.

The building will be heated throughout by electricity. The hot water will be electrically heated and stored at the various temperatures required for the spray-bath and kitchen purposes. Ventilation throughout the building is largely natural, but is supplemented in such places as the bath and the large hall by electric extraction apparatus.

The garden will be fully employed as playground in the afternoon, and as practice grounds for the young athletes. At the same time it will afford a pleasant place for the older members of the family to watch the sports and games of the younger members.

¹⁴ (page 141) See Pavlov's *Conditioned Reflexes in Dogs*.



